NEW EQUIPMENT DIGEST

A Penton Publication

July, 1957

Volume 22—Number 7

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CHECK AND PASS ALONG

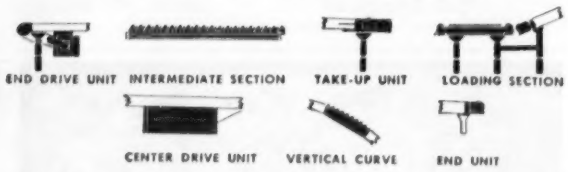
✓	NAME	See No.

Use Inquiry Slips—Pages 16 and 80

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

BELT CONVEYOR ASSEMBLY
consists of seven basic components

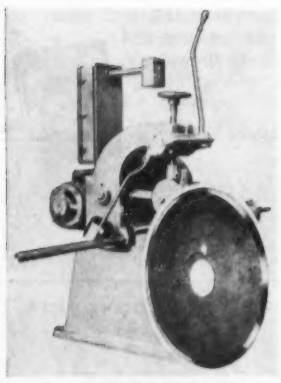
Center drive unit, end drive unit, loading section, end take-up unit, vertical curve, intermediate sections and an end unit are seven basic components from



which series G Unibilt heavy duty belt conveyors are assembled. They are bolted together in many combinations to produce a customer-assembled unit. Conveyor features a 6¼-in. deep formed steel channel and floor supports for permanent or flexible installation and vertical adjustment. Standard widths of 18, 24 and 30 in. are offered with choice of drives, speeds, roll spacing and types of belting. It matches corresponding widths of live and roll gravity conveyors, as well as slider bed belt conveyors. Made by **Conveyor Specialty Co.,** 40 Newport Ave., North Quincy 71, Mass.

▲ For more details circle **NED-1 G7** on enclosed inquiry slip ▲

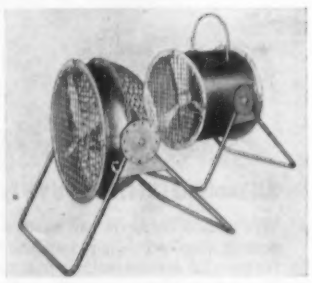
CUTOFF WHEELS
for rotary pipe and tube machines



Low cost chrome-content steel cutoff wheels for use on rotary pipe and tube cutoff machines are available in standard sizes from stock. They have a 55-56 Rockwell C hardness, are practically chipproof and cut cleanly. A 6-in. diameter by ⅛-in. thick double bevel wheel with 1½-in. bore costs $5.50 in lots of six. Special sizes, bores and bevels can be specified. Made by **Quick-Shear Wheel Co.,** Dept. D12, 5240 Winona St., Chicago 30, Ill.

▲ For more details circle **NED-2 G7** on enclosed inquiry slip ▲

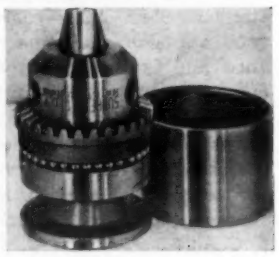
CRADLE-MOUNTED FANS
five sizes from 16 to 36 in.



Product and man cooling, drying, recirculation and elimination of air stratification are uses for line of direct-connected cradle-mounted fans. Five sizes from 16 to 36 in. have air delivery ratings up to 18,700 cfm. They have either venturi entrance ring or tubeaxial construction and wire safety guards on both sides. Rotation through 360 degrees makes fans suitable for use on floor, wall or ceiling. Propellers are sparkproof aluminum-magnesium alloy with airfoil cross-sections. Totally enclosed, sealed, moisture-protected motors are standard, with explosionproof and abnormal or outdoor service motors optional. Made by **Robbins & Myers, Inc.,** Propellair Div., Dept. C, 1345 Lagonda Ave., Springfield 99, O.

▲ For more details circle **NED-3 G7** on enclosed inquiry slip ▲

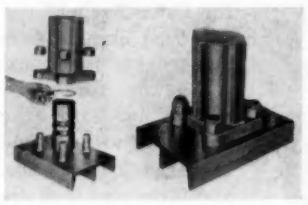
BALL BEARING CHUCKS
afford extra gripping force



Ball thrust bearing between chuck body and gear-nut is featured in series 20 ball bearing geared chucks. These chucks reportedly will grip with much greater force with the same key tightening effort. Ball races are formed directly in the hardened chuck body and in the one-piece gear-nut. Sleeve is smooth to prevent snagging clothing or other materials. Made by **Supreme Products Corp.,** 2230 S. Calumet Ave., Chicago 16, Ill.

▲ For more details circle **NED-4 G7** on enclosed inquiry slip ▲

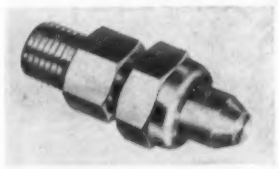
AIR-OPERATED VIBRATOR
bolted to bin or base plate



Only two parts comprise the type KO air-operated vibrator. Its steel piston is housed in a cast aluminum or semisteel cylinder block. The assembly is bolted directly to the bin, or to a base plate welded on the bin. Weight of 2 and 4-in. sizes with aluminum cylinders is 13 and 79 lb, respectively. Unit is permanently lubricated with molybdenum disulfide, a molecular dry film lubricant. Application can be to bins, chutes, hoppers and tubes to move all types of bulk materials. Made by **Cleveland Vibrator Co.,** 2744 Clinton Ave., Cleveland 13, O.

▲ For more details circle **NED-5 G7** on enclosed inquiry slip ▲

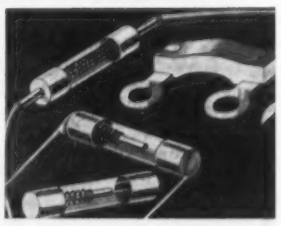
SPRAY NOZZLES
in 0.042 to 1.4 gpm capacities



Twelve different nozzles are offered in the Full Cone spray nozzle line and include both male and female pipe connections. Capacities range from 0.042 to 1.4 gpm at 20 psi. Each unit has a strainer. Full cone spray pattern is uniform in distribution and the spray angle ranges from 50 to 67 degrees as capacity increases. Made by **Spraying Systems Co.,** 3211 Randolph St., Bellwood, Ill.

▲ For more details circle **NED-6 G7** on enclosed inquiry slip ▲

OVERHEATING PROTECTORS
for electrical devices, apparatus



Many types of electrical devices or apparatus can be protected against excessive overheating by Heat-Limiters which shut off current at a predetermined temperature. Devices can be installed in the heater element circuit or, if the heater current is controlled by a contactor, in the relay circuit. Various types are available in many terminal styles. Cut-out temperatures range from 200 to 500° F. Made by **Bussmann Mfg. Co.,** 2534 W. University, St. Louis 7, Mo.

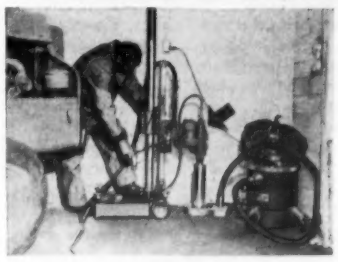
▲ For more details circle **NED-7 G7** on enclosed inquiry slip ▲

LEVER PULLERS
compact ¼ and ½-ton capacity units

Lifting, lowering and dragging operations can be performed by the Peerless Pal lever puller, a compact tool with an oval link chain, ratchet head in the operating handle and a friction holding brake. Snatch block which doubles capacity can be installed without tools. Puller is made in ¼ and ½-ton capacities and requires a minimum of headroom. Handle operates in any position. Tubular handle begins to bend when puller is overloaded and breaks at 60 per cent overload. Standard hook travel is 5 ft, but chain can be supplied for any length. Weights are 5¾ and 11¾ lb. Made by **Harrington Co.,** Plymouth Meeting 30, Pa.

▲ For more details circle **NED-8 G7** on enclosed inquiry slip ▲

MASONRY DRILL UNIT
operates on 90 psi compressed air



Masonry drilling operations beyond the reach of power lines can be done with this air-operated diamond drilling unit. The Truco air motor develops 4½ to 5 hp and can be powered by any standard compressor unit that delivers 90 psi air pressure at 90 to 95 cfm. Unit drills any size hole from 3 to 14-in. diameter in reinforced concrete, granite, marble, brick, concrete block and quartz. It can be mounted on traverse arm of any standard Truco drilling machine and swung through 360 degrees to drill in any position and at any angle. Weighing 240 lb, unit can be easily handled by two men. Made by **Wheel Trueing Tool Co.,** 3200-220 W. Davison Ave., Detroit 38, Mich.

▲ For more details circle **NED-9 G7** on enclosed inquiry slip ▲

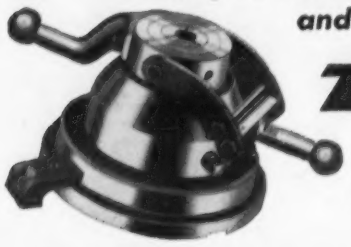
ELECTRIC LIMIT GAGES
signal lights used to show size

Signal light attachment for "go-no go" electric limit contact gages shows size within 0.000020-in. over and undersize, as well as correct size by flashing of green, red or yellow lights. Comparators are available with or without a dial to permit observation of the position relative to tolerance limits. Automatic controlling devices can be attached to the second socket of the signal light box. These could include acoustic signals, parts-segregating switches controlled by electric limit contacts, or auxiliary relays for use of larger, higher powered control devices. Made by **George Scherr Co.,** Dept. NED, 200 Lafayette St., New York 12, N. Y.

▲ For more details circle **NED-10 G7** on enclosed inquiry slip ▲

EFFECTIVE EFFICIENT ECONOMICAL

way to HOLD your work— and your business WITH



Zagar COLLET FIXTURES

Eliminates special set-ups; cuts time, reduces costs. Precision built to Zagar standards. No vertical movement. Uses standard 5-C draw type collet. Indexes up to 25 positions (4, 6, 8 standard). A long-since proven aid to production *plus accuracy.*

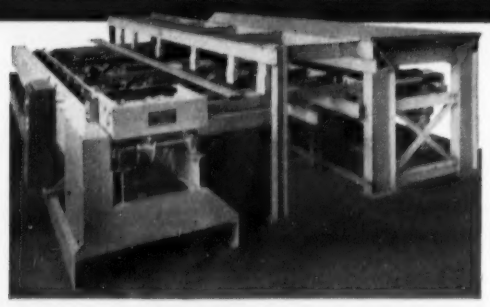
Ask for Catalog N-7.

ZAGAR, INC. 23880 LAKELAND BLVD., CLEVELAND 23, OHIO

Zagar TOOLS FOR INDUSTRY and SPECIAL MACHINERY

For more details circle NED-11 G7 on enclosed inquiry slip

HOPPER FEED LONG ROUND BARS OR TUBES FROM HOPPER TO SHEAR AUTOMATICALLY



10,000 lb. bundles are dropped into hopper, shown at right. Metering transfer table, in center, transfers the bars to the "V" roll conveyor, shown at left, through metering hands and escapement fingers, which release one bar at a time upon receipt of a signal from the "V" roll conveyor, thus the powered "V" roll conveyor feeds the shears automatically and continuously at its maximum capacity.

"Automation Specialists—Since 1923"

SPURGEON CO.
23501 HOOVER ROAD
VAN DYKE, MICHIGAN

Write for Catalog

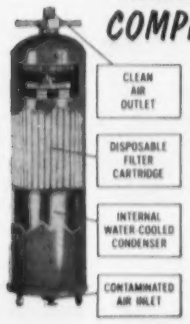
For more details circle NED-12 G7 on enclosed inquiry slip

IN PLANTS THROUGHOUT THE WORLD ENGINEERS SPECIFY

HANKISON Condensifilters

for INSTRUMENT-QUALITY COMPRESSED AIR

HERE IS YOUR ANSWER TO COMPRESSED AIR PROBLEMS



From steel companies to steamships . . . from paint spray equipment to power plants . . . wherever POSITIVE PROTECTION for pneumatic instruments and controls is required, Hankison Condensifilters are specified.

Condensifilters eliminate:
- Moisture, *entrained and vaporized*
- Oil, *entrained and vaporized*
- Dirt — Scale — Rust

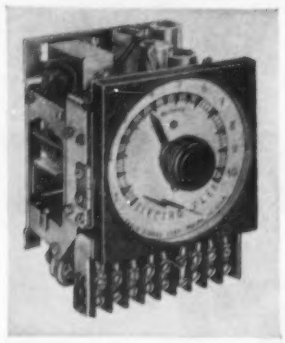
Write today for Bulletin M-7155R.

HC-12 *Condensifilters are ASME coded.*

HANKISON CORPORATION
Biltmore Building • Pittsburgh 16, Pa.

For more details circle NED-13 G7 on enclosed inquiry slip

ELECTRONIC RESET TIMER
times 0.05 to 10-second intervals



Short intervals from 0.05 to 10 seconds can be timed accurately within 2 per cent of initial setting by this bulletin 150 Electroflex electronic reset timer. Accuracy is maintained despite voltage variations of −15 to 10 per cent, ambient temperature changes of 70 to 140° F, tube replacement and/or nominal vibration and humidity. Unit adapts itself to Eagle's accessory plug-in mounting kits. Dial on timer shown may be removed from timer and located remotely. Made by **Eagle Signal Corp.**, Dept. 1, 202 Twentieth St., Moline, Ill.

For more details circle NED-14 G7 on enclosed inquiry slip

SOFT RUBBER CASTER WHEEL
long wear type protects floors

Soft tread wheel incorporated in standard 2-in. chair casters has good abrasion and impact resistance and is designed for maximum floor protection without loss of swiveling efficiency. It is 1/16-in. wider than the model it replaces and is said to provide 50 per cent longer service. Made by **Bassick Co.**, Dept. N, Bridgeport 5, Conn.

For more details circle NED-15 G7 on enclosed inquiry slip

ELECTRIC TRUCK ATTACHMENT
forks extend to reach and place load

To pick up a palletized load from the floor or storage rack, the HydraFork attachment for Lewis-Shepard riding type electric tiering trucks simply extends the forks hydraulically into the pallet. Load is lifted over the load wheels, and forks and load are retracted. Load is placed by reversing the procedure. Truck can operate in aisles as wide as the length of the truck and its forks. Attachment is available on all model M and MN electric tiering trucks in capacities to 3000 lb. All such trucks have 10-in. diameter rubber tired wheels and a range of fork elevations. Made by **Lewis-Shepard Products, Inc.**, Dept. R-8, 125 Walnut St., Watertown 72, Mass.

For more details circle NED-16 G7 on enclosed inquiry slip

IMMEDIATE DELIVERIES for every plant, garage, shipper need

STOCK METAL WARNING SIGNS
OVER 300 TITLES in VIVID BAKED ENAMEL

PROVED SAFETY BUILDERS warn against all fire, driving, work and machine operating hazards. Brilliant enamel lettering won't fade or peel. Rustproof, sturdy metal 10" x 14" for indoor or outdoor use.

Compel attention with
DAV-SON "SAFETY DIRECTOR"
Flashing Display Board
Red-green flasher lights. Exclusive changeable-letter removable panel.

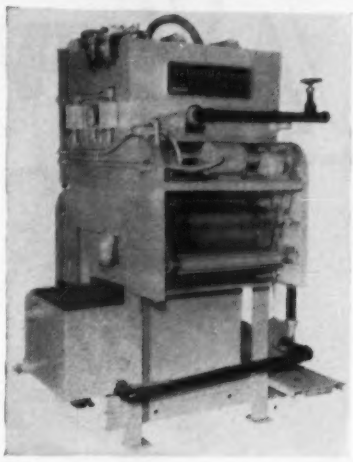
For countless uses—DAV-SON Genuine Self-Sealing CORK BULLETIN BOARDS
Over 100 indoor, outdoor types. Wood, metal frames, locking glass doors. Lighting optional.

WRITE TODAY for big FREE CATALOG! Dealer Inquiries Invited.

A. C. DAVENPORT & SON, INC.
Now in Our 25th Year of Quality Service
Dept. NE, 311 N. DESPLAINES ST. • CHICAGO 6, ILL.

For more details circle NED-17 G7 on enclosed inquiry slip

HYDROMATION FILTER



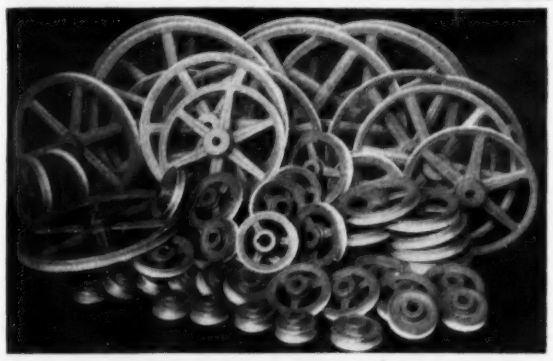
REMOVES DIRT & SLUDGE AUTOMATICALLY AT LOW COST

This filter is well suited to all types of industrial filtration. On a completely automatic cycle it will take dirt and sludge out of liquids, remove the sediment, replace the filtering media, and resume filtration. Liquids can be filtered from 10 gpm to 3000 gpm with a degree of filtration as fine as .0002.

The HYDROMATION FILTER operating under pressure and using filter media in roll form offers low operational cost.

HYDROMATION ENGINEERING CO.
19665 Schoolcraft Detroit 23, Michigan

For more details circle NED-18 G7 on enclosed inquiry slip



BROWNING FHP SHEAVES

the most extensive line on the market!

Only Browning offers you all three kinds of sheaves: **Die Cast** for light duty, low initial cost. **Pressed Steel** for sturdy, rugged service at medium price. And **Cast Iron** for heavy duty, highest quality, greatest value; with fixed bore or Browning's famous interchangeable split taper bushing. Choose the sheave most efficient and economical for your every job from Browning's complete range of stock sizes.

Ask your Browning distributor or write us for Catalog V147.

Browning MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY

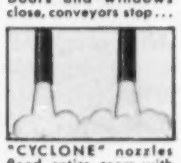
For more details circle NED-19 G7 on enclosed inquiry slip

Shuts Doors, Windows, Stops Conveyors, Sounds Alarm.....

KILLS TOUGH FIRES!

A fire! Detector "triggers" entire system . . .

Doors and windows close, conveyors stop . . .



"CYCLONE" nozzles flood entire room with CO_2 in 15 seconds.

Randolph EXTINGUISHING SYSTEMS

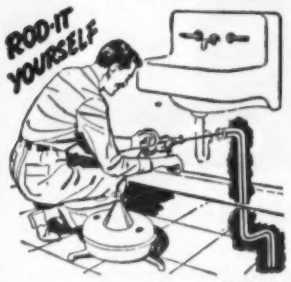
Where fire hazards are severe and access limited . . . play safe! Be ready and secure with a *fast action* Randolph Automatic Fire Extinguishing SYSTEM!

Write today for Randolph's free FIRE HAZARD INDEX listing equipment safeguards for 580 typical fire hazards. Randolph Laboratories, Inc., 7 East Kinzie Street, Chicago 11, Illinois.

For more details circle NED-20 G7 on enclosed inquiry slip

YOU MUST READ THIS!

Before you pay out another costly plumbing bill

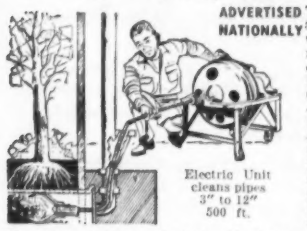


Chicago — July 1st — Factories Offices, Machine Shops including Home Owners are constantly having trouble with clogged-up pipes which proves expensive in Costly Plumbing Bills—

But now—here is a **new Rodding Tool** designed to clean out the most stubborn drain & sewer stoppages. Not just an ordinary rod, but a patented unit guaranteed to make every bend up to 100 ft. A new discovery in Swedish music wire gives the rod 100% more flexibility than any other sewer cable. Yet anyone can operate this rod which is whirled down the drain in a few minutes.

ADVERTISED NATIONALLY

TOILETS, URINALS, SINKS, and FLOOR DRAINS clogged with paper, grease, rags, soap, metal chips, and sand can be cleared **saving the owner the Rodding Tools price, the first time it is used.** Cutter blades can be attached for removing roots. This new unit can be used on any ½" to 6 inch waste pipe including Septic Lines, Sewers, Laundry Tubs, Bathtubs, and avoids Flooded Basements. Obstructions give away immediately when struck by this new type of Sewer Machine.



Electric Unit cleans pipes 3" to 12" 500 ft.

We offer this new Rodding Tool on a 30-Day Free Trial to prove its value. **BUT MOST IMPORTANT IS THIS**—What is this Tool worth to your Building, Factory or in your own Home in Costly Plumbing Bills Saved! FREE BOOKLET lists latest Discoveries in Hand & Electric Units, Root Cutters, Water Impact Guns—For your own good—Fill coupon now. **No agent will call,** or write Postcard (Chgo. phone KIldare 5-1702)

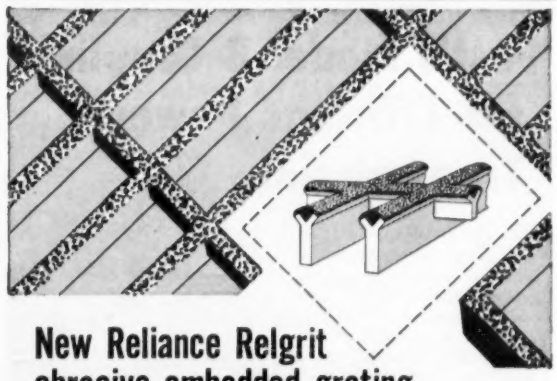
MILLER SEWER ROD, Dept. N.D., 4642 N. Central Ave., Chicago 30, Ill. Please send FREE BOOKLET on Rodding. I am not obligated.

NAME .....

FIRM .....

STREET ..... CITY ..... STATE .....

For more details circle **NED-21 G7** on enclosed inquiry slip



New Reliance Relgrit abrasive embedded grating gives safe footing under all conditions

Reliance Relgrit abrasive embedded grating is the safest grating available. Even when covered with oil, Relgrit has a coefficient of friction over 30% greater than dry steel grating. Abrasive aluminum oxide is actually embedded in deep V-grooves in the top surfaces of both bearing and cross bars. The abrasive surface will last as long as the grating without any loss of non-skid qualities. For your free sample of this remarkable new grating, write on your letterhead to Reliance Steel Products Company, P. O. Box 510-M, McKeesport, Pa.

Reliance Steel Products Company

For more details circle **NED-22 G7** on enclosed inquiry slip

The popular model OA, left, is shown mounted on ceiling. The model OAB, right, has large reel capacity.

Keep hose and cable off the floor when not in use—increase plant safety. Greatly extend hose and cable life—save on replacement cost.

Hose or cable is paid out freely from a WELDREEL unit and locks at any desired length. A slight tug releases the locking pawl and a spring rewinds hose or cable onto reel.

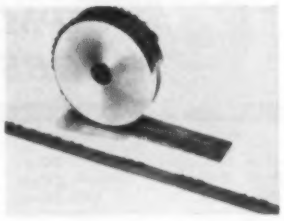
Available in Models to hold from 40' to 150' of double hose, 50' of single hose, or 100' of cable.

Write for complete information.

UNITED SPECIALTIES, INC.
P. O. BOX 698 EL DORADO, ARKANSAS

For more details circle **NED-23 G7** on enclosed inquiry slip

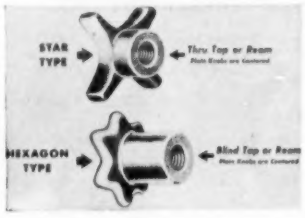
CONTINUOUS PRINTING WHEEL rubber dies are easily positioned



Either individual letters or logotypes are easily pressed into place in the groove of the E-Z Set aluminum printing wheel and remain in place at high speeds. Printing message is easily stripped off the wheel. Wheel handles type characters and logos from 1/16 to 3 in. high, with different sizes used in the same wheel. Wheels of 4, 6 and 8 in. are available for use with all Pannier hand and automatic printers. Pann-Off offset printing dies can also be used. Made by **Pannier Corp.**, 301 Sandusky St., Pittsburgh 12, Pa.

For more details circle **NED-24 G7** on enclosed inquiry slip

ALUMINUM KNOBS hexagon and star types

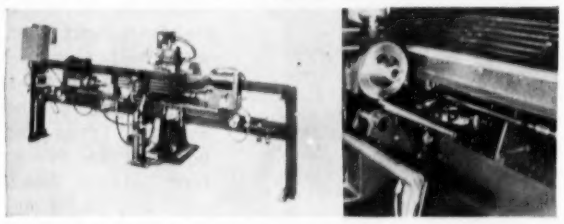


Minimum tensile strength of 20,000 psi is reported for line of aluminum hand knobs. Star type is available in five sizes from 1 to 3-in. OD, through-tapped, reamed or plain. Latter type is centered. Hexagon type is made in four sizes from 2 to 3-in. OD, blind tapped, reamed or plain and centered. Various standard threads are offered in each type. Made by **Northwestern Tool & Engineering Co.**, 127 Hollier Ave., Dayton 3, O.

For more details circle **NED-25 G7** on enclosed inquiry slip

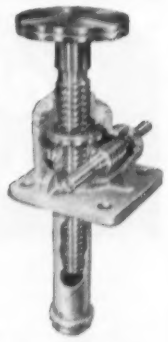
TUBE CUTOFF MACHINE cuts, drills, faces 5000 per day

Straight, tapered and step metal tubes can be cut and deburred automatically with model 3D cutoff machine at a rate of about 5000 per day. Tubes are fed to



drilling heads that deburr, face and drill any hole size desired in the tube ends. Both heads are adjustable for tubes from 9 to 36 in. long and 1 to 1½ in. in diameter. Cutoff machine can be set for center or off-center cuts. Tubes are gravity-fed from a hopper. They are clamped, ends are drilled and faced, then tubes are fed into cutoff machine by short conveyor to be cut in half. Made by **Continental Machine Co.**, 1954 N. Maud Ave., Chicago 14, Ill.

For more details circle **NED-26 G7** on enclosed inquiry slip



Duff-Norton worm gear jacks available in 5 to 50 ton capacity

Use these perfected mechanical devices for precise, positive control of linear motion, applying pressure, resisting impact.

Two or more can be easily connected by shafting and mitre gear boxes to give a positive drive so that jacks always raise or lower under equal or unequal loads in perfect unison. 5 to 50-ton caps., raise up to 25-ins., worm gear ratios 6¾:1 to 27:1; turn of worm for each 1-in. raise—10 to 40. Acme or square threads. Bellows boots available for certain models.

Send for free booklet showing many successful applications and complete specifications, including questionnaire for aid in selecting proper jack. Ask for bulletin AD34-N. **Duff-Norton Co., P. O. Box 1889, Pittsburgh 30, Pa.**

For more details circle **NED-27 G7** on enclosed inquiry slip

Let me give you this NEW fact-packed forging guide

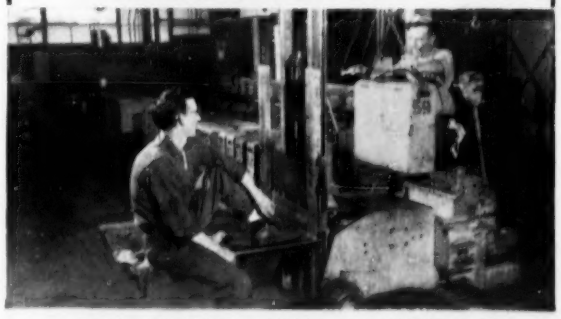
If you buy or specify forgings, write for this fact-packed AmForge book. Its 16 pages show how your company can benefit from better AmForge research, engineering and control. You'll see that all this adds up to the kind of "service" you need for production quality and economy. Either circle the number on the magazine service card or write AmForge, Dept. NED7, 157 N. Wacker Dr., Chicago 9, Illinois.

AMFORGE DIVISION AMERICAN Brake Shoe COMPANY

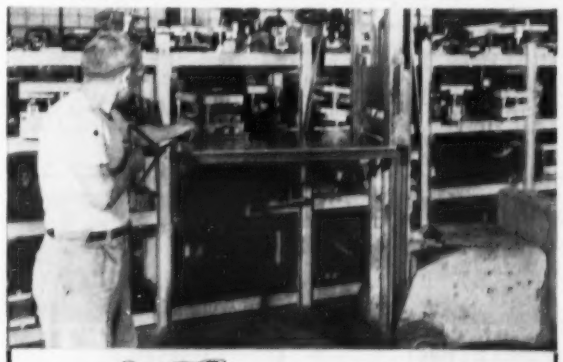
For more details circle **NED-28 G7** on enclosed inquiry slip

WHERE ARE YOUR TRUCKS an hour before the work shift ends?

RECHARGING ?



OR STILL WORKING ?



ELIMINATES DOWNTIME DUE TO BATTERY FAILURE

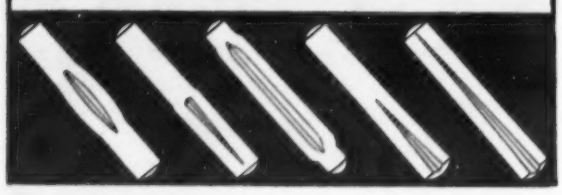
Several ounces of LIFETIME-CHARGE in each cell of your electric truck batteries prolong battery use between chargings and lengthen over-all battery life. LIFETIME-CHARGE constantly dissolves lead sulphate that forms on battery cell plates, keeping more plate area exposed and keeping batteries nearer full charge.

In a four month test at a large automotive stamping plant, batteries treated with LIFETIME-CHARGE lasted four to five times longer between chargings than untreated batteries. For complete details, write Magnaflo Company, Inc., Central Tower, Youngstown, Ohio, or phone RIverside 4-3557.

MAGNAFLO COMPANY, INC.
CENTRAL TOWER • YOUNGSTOWN, OHIO

For more details circle **NED-29 G7** on enclosed inquiry slip

Use GROOV-PINS to Solve Your Pin Fastening Problems...



QUICKLY . . . no tapping, reaming, peening, milling—just drill the hole and drive in the Groov-Pin.

EASILY. . . no hardening, tempering, heat-treating—Groov-Pins can be driven by hand hammer, air cylinder or hydraulic press.

SAFELY. . . no assembly failures due to loosened or disengaged pins—Groov-Pins provide a force fit which will successfully withstand severest vibration.

ECONOMICALLY . . . this simplified method of pinning saves operational steps, assembly time, tool costs.

Available in cold rolled steel in a wide variety of types and sizes. Other stocks and special production to specifications also available.

SEND FOR SAMPLES, PRICES, COMPLETE INFORMATION

GROOV-PIN CORPORATION

1125 Hendricks Causeway, Ridgefield, New Jersey

Also manufacturers of Tap-Lok Inserts. | Representatives in principal cities throughout the U. S. A. | In Canada: Metal and Wood Fastening Devices Co., Valois, Montreal | TWX: Cliffside 26

For more details circle NED-30 G7 on enclosed inquiry slip

NEW EQUIPMENT DIGEST

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

Penton Building, Cleveland 13, Ohio

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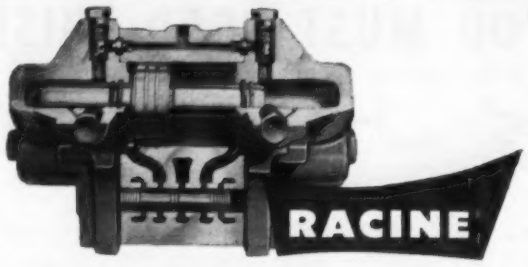


RACINE

HYDRAULIC PRESSURE BOOSTERS

This patented RACINE PRESSURE BOOSTER builds pressures as high as 5000 psi. With it you can economically multiply the pressure from your low pressure pump as much as seven to one.

It allows you to use low pressure at low cost for many operating and closing actions. High pressures to 5000 psi, automatically cut in for final forming and holding operations, or curing cycles on your machine.

Simple design, pressure lubricated rugged parts and the use of extremely high tensile materials make RACINE Pressure Boosters practically indestructible.

Learn how you can have "High Pressure Values at Low Pressure Costs." Write today!

RACINE HYDRAULICS & MACHINERY, INC.
2087 Albert St., RACINE, WISCONSIN, U.S.A.

For more details circle NED-35 G7 on enclosed inquiry slip

Proven Performance

BORG-MOTORS

- LONG-LIVED
- POWERFUL
- DEPENDABLE

• Borg-Motors are designed for quality instrument applications. They are available in synchronous and induction types . . . with or without gear trains! Rotor mounted on two ball bearings . . . precision gears assure long life and accuracy. Write today for the name of your nearest Borg Jobber or "Tech-Rep"!

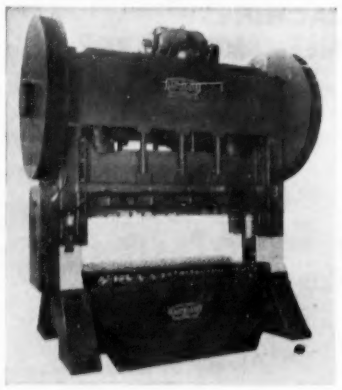
WRITE FOR COMPLETE INFORMATION-CATALOG BED-A56

BORG EQUIPMENT DIVISION
THE GEORGE W. BORG CORPORATION
JANESVILLE, WISCONSIN

Built by Borg — MOTORS MICROPOTS MICRODIALS

For more details circle NED-31 G7 on enclosed inquiry slip

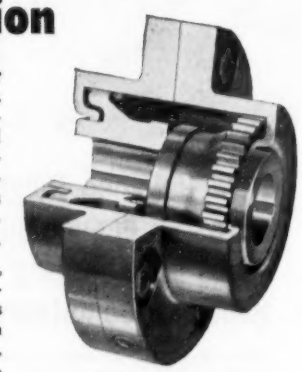
STRAIGHT SIDE PRESSES in capacities from 75 to 350 tons



Series of Cleveland straight-sided, double crank presses provides capacities from 75 to 350 tons for working any thickness of material from light sheet metal to heavy steel plate. Single-geared, double-geared and flywheel types can be used to punch, form, stamp, bend, cut and light-emboss light or irregular shapes. Die space, stroke, adjustment and bed area can be modified for an almost unlimited number of combinations. The 200-ton unit shown has twin drive and electrically controlled drum-type friction clutch with air brake. It has 8-in. stroke, 10-in. slide adjustment, 30-in. shut height, 48 x 96-in. slide or plunger face and a 33 x 81-in. bed opening. Made by **Cleveland Punch & Shear Works Co.**, 3917 St. Clair Ave., Cleveland 14, O.

For more details circle NED-33 G7 on enclosed inquiry slip

Fast's Model B Coupling for *Efficient* Power Transmission



Model B Couplings . . . for light and medium drives . . . eliminate crank action, vibration and metal-to-metal contact between teeth—lubrication is positive. Ruggedly constructed, Fast's Couplings often are wear-free after 30 years of service.

Providing highly efficient, economical power transmission, Fast's Couplings have retained leadership in their fields for over 35 years. The Model B is manufactured for shaft sizes up to 2⅝". Koppers free engineering service is available without obligation to you. For the most cost-saving answer to any coupling problem, write to KOPPERS COMPANY, INC., *Metal Products Division*, 3807 Scott Street, Baltimore 3, Maryland.

KOPPERS — THE ORIGINAL FAST'S Couplings

Engineered Products Sold with Service

For more details circle NED-36 G7 on enclosed inquiry slip

TAKE YOUR PICK!

Special Chromalox features solve 3 spot heating problems

FLEXING

Spring strain reliever of high temperature stainless steel for applications in which cartridge heater leads flex. High tensile spring, mechanically locked to heater, covers lead wires a distance sufficient to distribute stress.

ABRASION

Flexible brass conduit protects cartridge heater lead wires against abrasion from other moving parts and from accidental mechanical damage. Safety factor where lead wires are exposed to machine operator.

MOISTURE

Moisture-resistant flexible brass conduit protects lead wires of cartridge heaters operating in presence of steam, water, oil and vapors. Added protection from flexing, vibration and mechanical damage.

FREE BULLETIN!

CHROMALOX ELECTRIC CARTRIDGE HEATERS

Get the full story. Call your Chromalox Representative or write today for Bulletin 850.

C-2101

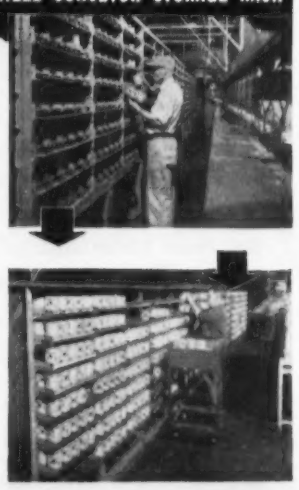
Edwin L. Wiegand Company
7509 Thomas Boulevard • Pittsburgh 8, Pa.

See other ad on page 75

For more details circle NED-32 G7 on enclosed inquiry slip

Easy in Easy out...

WHEEL CONVEYOR STORAGE RACK



Easy loading at the load end, easy removal at the discharge end . . . and when a part is removed—another rolls into place. Logan Wheel Conveyor Storage Racks:

(a) Eliminate confusion and hazards which frequently accompany use of skids and trucks. (b) Save aisle space required for trucking. (c) Stock always ready on first-in-first-out basis. (d) Material flows by gravity.

Adaptable to many industries. Write for further information.

LOGAN CO.
215 Cabel St.
LOUISVILLE, KY.

Logan Conveyors

For more details circle NED-34 G7 on enclosed inquiry slip

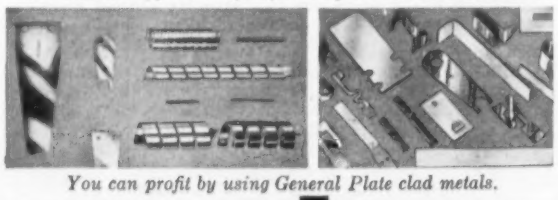
This is a typical Truflex® formed part

Illustrated is one of many parts being produced by General Plate's Truflex Thermostat Metal Department. Today, hundreds of manufacturers rely on General Plate's years of processing experience for thermostat metal parts that control, compensate and indicate temperature.

You can depend on Truflex parts!

- Truflex parts and sub-assemblies are engineered to your specifications, ready for installation.
- Every piece — in lots of 10 or 10,000 — is a duplicate of the original . . . eliminating rejects and costly assembly adjustments.
- Production problems, special equipment, and prolonged experimental work are all eliminated when you use Truflex parts.
- If you prefer to make your own parts, Truflex Thermostat Metals are available in extra long coils or flat strips manufactured to your exact specifications.

Here are other typical Truflex formed parts and sub-assemblies.

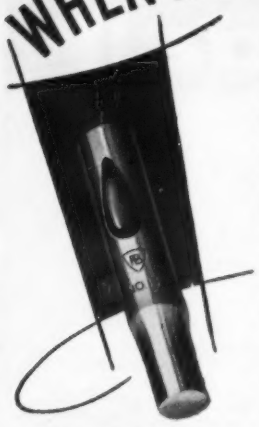


You can profit by using General Plate clad metals.

METALS & CONTROLS CORPORATION
General Plate Division 1807 Forest Street, Attleboro, Mass.

For more details circle NED-37 G7 on enclosed inquiry slip

WHEN R-B Punches Are Used



What are your piercing or forming requirements—standard or unusual shapes—small or large holes—steel or special alloys—thin or thick metals? There is either an R-B punch in standard shapes and sizes or R-B will manufacture special punches, die buttons and retainers to your specifications that will provide more efficient piercing operations.

Many hole-making applications, formerly requiring drilling or some other costly means, can now be done with R-B interchangeable punches. If you have thought your piercing jobs too tough for interchangeable punches, it will pay you to investigate the wide application potential of R-B standardized equipment.

R-B Engineering Service Is Available for Your Tough Piercing Problems.

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
Dept. 73, 26482 Capitol Ave., Detroit 39, Mich.

Also Produced in **OTHER ALLIED PLANTS**
SPECIAL COLD FORGED PARTS • STANDARD CAP SCREWS
PRECISION GROUND PARTS • SHEET METAL DIES MADE OF FERROUS ALLOYS, ZINC ALLOYS OR PLASTICS

For more details circle NED-38 G7 on enclosed inquiry slip

MicroRold 430
the general utility STAINLESS STEEL

Since 430 meets military specifications, why not investigate this grade for your product

This straight chromium stainless grade possesses desirable qualities of beauty, corrosion resistance, strength, long life and low maintenance that are also of value in many civilian applications. More than 50% of all stainless applications could satisfactorily employ 430 stainless as an economical and practical material. Type 430 stainless costs 10¾ cents per pound less than the 18-8 grade. Some of our customers are already saving more than $215 per ton using our MicroRold 430 stainless sheet. Why not investigate the possibilities of this general utility 430 stainless.

Send today for your copy of our 24-page booklet, "MicroRold 430 Stainless Steel Handbook."

Washington Steel *Corporation*
7-R WOODLAND AVENUE, WASHINGTON, PA.

For more details circle NED-39 G7 on enclosed inquiry slip

ONE MIXER DOES IT
AT LOW COST - FOR MANY DIFFERENT MIXING JOBS!

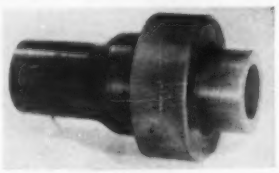
The **PATTERSON**
TYPHOON
PORTABLE POWER MIXER

If you have a batch mixing problem, solve it with TYPHOON Portable Mixers! A single unit serves several tanks or kettles—easy to carry from point to point, light, powerful, sturdy, long-lived. Direct or geared drive models from ¼ to ¾ HP. Write!

The Patterson Foundry and Machine Company
A Subsidiary of Ferro Corporation
East Liverpool, Ohio, U. S. A.
The Patterson Foundry and Machine Company, (Canada) Limited
Toronto, Canada
MONTREAL

For more details circle NED-40 G7 on enclosed inquiry slip

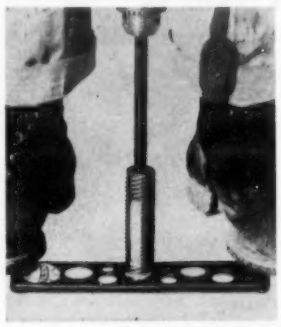
PVC LIFT CHECK VALVE
in ½ to 3 in. full-flow sizes



Made of normal-impact polyvinyl chloride, this lift check valve for chemical and petroleum applications is offered in ½, ¾, 1, 1¼, 1½, 2 and 3-in. sizes, in threaded or socket welding types. Valve is easily removed from line for servicing. It operates in either vertical or horizontal position and opens and closes under less than 6-psi pressure. Flow area is 100 per cent. Made by **Tube Turns Plastics, Inc.**, 2929 Magazine St., Louisville 11, Ky.

For more details circle NED-41 G7 on enclosed inquiry slip

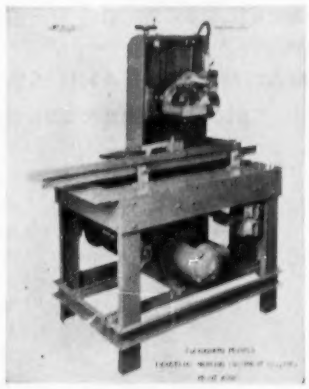
STARTING GUIDE
for masonry drills of varied sizes



Guide holes in starting guide for ¼ to 1¼-in. diameter rotary Konkrete Kore drills provide a means of precision starting and hole locating. It eliminates need for starting drills and is supplied free to users of Tilden masonry drills. Advise size and make of drill being used and from whom purchased when requesting directly from **Tilden Tool Mfg. Co.**, Dept. NED, 209 Los Molinos, San Clemente, Calif.

For more details circle NED-42 G7 on enclosed inquiry slip

PACKAGE PRINTER
adapts to package of any size



Aniline printing system and a reservoir-fed adjustable printing head are utilized by the No. 602 Flexograph package printer. Originally designed to imprint or trademark bricks, it can be used to mark, date, code or otherwise identify square or oblong packages or products of almost any size. Chain driven machine takes its speed from the speed of the conveyor line that feeds it—up to 60 units per minute. Feed into and out of the machine is automatic. It can also be furnished with explosionproof motor and controls. Made by **Industrial Marking Equipment Co.**, Dept. NED, 454 Baltic St., Brooklyn 17, N.Y.

For more details circle NED-43 G7 on enclosed inquiry slip

Aftercooler and Cyclone Separator designed for cleaner, dryer compressed air

The Adams Aftercooler and Cyclone Separator are designed to efficiently condense and remove water from compressed air and process gas. Condensed moisture and entrained dirt and oil are subsequently removed in a cyclone type separator. This unit is scientifically designed for maximum removal efficiency over a wide range of flow rates.

For normal use, units are available to cool gases to within 10° F of the temperature of the cooling water. Specially designed units are available to permit a 2° F approach to cooling water temperature, for application where low moisture content is critical.

Adams Aftercoolers and Separators are available from stock to handle 20 - 40,000 cfm with 10° cooling and 25 - 19,200 cfm where it is necessary to cool within 2° F of the cooling water. Special units can be supplied to suit an unlimited range of requirements. In all cases, a pressure drop of ½ psi is assumed at a maximum working pressure of 150 psi.

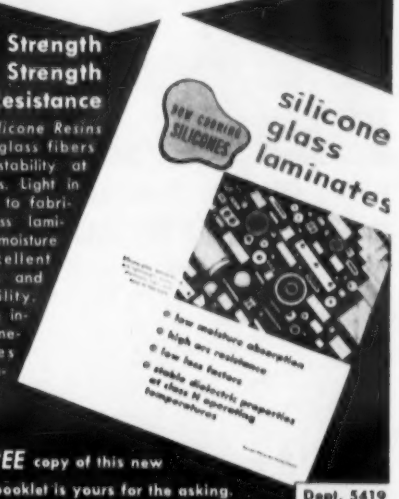
This wide range of sizes enables the cost-cutting application of Adams Aftercoolers and Separators in virtually all industrial application. For further information on how R. P. Adams' units will solve your compressed air problems and save you money, write today for Bulletin 711. R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York. *ADVT*

For more details circle NED-44 G7 on enclosed inquiry slip

send for this new brochure on SILICONE GLASS LAMINATES

- **Dielectric Strength**
- **Structural Strength**
- **Moisture Resistance**

Dow Corning Silicone Resins laminated with glass fibers offer dielectric stability at high temperatures. Light in weight and easy to fabricate, silicone-glass laminates have low moisture absorption, excellent physical strength, and good machinability. Get the valuable information on silicone-glass laminates that's been compiled in this new brochure.



FREE copy of this new booklet is yours for the asking. Dept. 5419

first in silicones

Dow Corning CORPORATION
MIDLAND, MICHIGAN

For more details circle NED-45 G7 on enclosed inquiry slip

Simple—Accurate—
WEIR METERS
for Waste Measurement

● Float-and-cable Weir Meters developed by Foxboro offer simple, accurate measurement of liquid flow. Widely used in sewage, chemical processes, and industrial waste disposal.

The Foxboro Weir Meter is extremely simple. Operates through motion of float to measure head through V-notch, rectangular or Cippoletti weirs—or Parshall flumes. Motion is transmitted by cable to accurate recording and integrating mechanisms. Direct-reading, uniform flow scale—copper or plastic-covered floats.

Write for Bulletin 10-19. **The Foxboro Company, 667 Neponset Ave., Foxboro, Mass., U. S. A.**

FOXBORO Reg. U. S. Pat. Off. WEIR METERS

For more details circle NED-46 G7 on enclosed inquiry slip

flexible plastic TUBING

Tygon Tubings combine true flexibility, glass clear transparency and exceptional resistance to corrosion. The many formulations provide superior service under a wide range of service conditions.

Some formulations are tasteless, odorless, non-toxic for high purity solutions such as plasma, drugs, liquid foods and milk products. Others handle corrosive gases and liquids and are chemically inert to attack by acids, alkalies, oils and alcohol. Still others withstand pressures to 300 p.s.i. or full vacuums. All formulations are physically tough, withstand rough usage and provide longer useful service.

Tygon tubings are installed in minutes. Cleaning is simplified by the highly polished bore. Fifty-five sizes from 1/16" through 3" provide a size for virtually every use.

Send for Bulletin T-97 today.

Plastics and Synthetics Division
U. S. STONEWARE
AKRON 9, OHIO

387E

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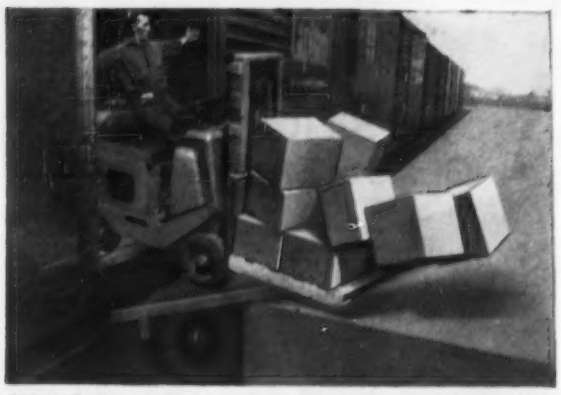


NEW! Eliminate board-slippage accidents like this with Magcoa Adjustable SPAN-LOCKS*

PROTECT against personnel injuries and costly damage to loads and equipment caused by dockboard slippage. Magcoa *Adjustable Span-Locks* are the new, easy-to-use protection that eliminate board slippage accidents on your loading dock.

ADJUSTABLE to a fraction of an inch, *Span-Locks* hold your Dockboard in the exact position you want for safe, efficient loading. You can use one Dockboard for both truck and rail loading . . . use the same Dockboard for wide-span parking, angle-parking, curved rail tracks or other loading problems. Magcoa *Span-Locks* make your board completely versatile . . . your operation absolutely safe.

SPAN-LOCKS snap into place . . . eliminate board slippage.

HOW YOU can use the *Span-Locks* in your specific operation is fully explained in an illustrated folder. Just circle reader service card. *Patent Pending

MAGNESIUM COMPANY OF AMERICA magcoa
MATERIALS HANDLING DIVISION • EAST CHICAGO 6, IND.

▲ For more details circle NED-50 G7 on enclosed inquiry slip ▲

OIL TIGHT
DUST TIGHT
OMNIDIRECTIONAL
Exceptionally Rugged!

New

OIL TIGHT INDICATOR LIGHTS
for heavy duty use in industrial applications

Perfect oil-tightness is effected by retained oil-proof gaskets and the gasketed glass lens assembly . . . Install easily in a single 1" or 1-3/16" panel mounting hole. Also available for 11/16" mounting hole.

A choice of *3 lens styles, 7 lens colors,* and other optional features provide adaptability.

DISCS with legends, behind flat lenses, deliver specific messages.

DIALCO

OIL TIGHT INDICATOR LIGHTS

accommodate a wide range of Incandescent and Neon Glow Lamps. For neon, DIALCO offers an exclusive feature — *BUILT-IN RESISTORS* (U. S. Patent No. 2,421,321) for operation on 105-125 V, or 210-250 V. Simple external resistors are provided for all higher voltages. *EVERY ASSEMBLY IS AVAILABLE COMPLETE WITH LAMP.* For design purposes we will gladly send you:

SAMPLES ON REQUEST—AT ONCE—NO CHARGE

CATALOG "L-200" gives you complete specs on DIALCO'S Oil-Tight Indicator Lights. Also available—a file of Special Catalogs on DIALCO Pilot Lights covering every indication requirement for automation and miniaturization.

FREE— Brochure on "Selection and Application of Pilot Lights."

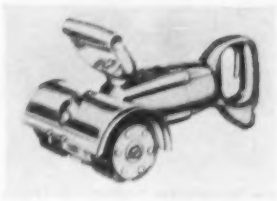
Foremost Manufacturer of Pilot Lights
DIALIGHT CORPORATION

46 STEWART AVE., BROOKLYN 37, N. Y.
Dept. NED
HYACINTH 7-7600

DIALIGHT CORP., 46 Stewart Ave., Brooklyn 37, N.Y. Dept. NED.
☐ Please send Cat. "L-200" on Oil-Tight Lights.
☐ "Selection" Brochure. ☐ Pilot Light Catalogs.
Name _____
Company _____
Address _____
City _____ State _____

▲ For more details circle NED-51 G7 on enclosed inquiry slip ▲

CLEANING TOOL removes rust, paint and dirt



Iron, steel, brick and concrete surfaces can be cleaned of rust, scale, oil paint and foreign accumulations by the model MP4 pneumatic cleaning tool. Function of rotor which "floats" on its spindle is unaffected by application of thrust. A governor keeps the tool operating at efficient speed. With a given set of weights, speed can be varied ±200 rpm by tightening or loosening the plunger stem in the plunger head. Motor develops slightly over 1 hp when operated on 90-psi air. Made by **Aurand Mfg. & Equipment Co.,** Dept. NED, 1210 Ellis St., Cincinnati 23, O.

▲ For more details circle NED-52 G7 on enclosed inquiry slip ▲

GAS-POWERED FORK TRUCKS now have exhaust purifier unit

Dynamotive electric-driven gasoline-powered fork trucks are now available equipped with an Oxy-Muffler catalytic exhaust purifier. Purifier will reduce the amount of carbon monoxide and hydrocarbons in the exhaust stream from 70 to 95 per cent for a minimum of 1000 hours. Catalyst can then be replaced on a exchange policy. Power train of truck consists of a high-output generator direct-coupled to a Continental gasoline engine. Generator powers a high-torque electric motor which is direct-coupled to differential pinion. Unit has 10,000-lb lifting capacity. Made by **Automatic Transportation Co.,** 149 W. 87th St., Chicago 20, Ill.

▲ For more details circle NED-53 G7 on enclosed inquiry slip ▲

MAGNETIC HAND SWEEPER picks up ferrous nails, shavings

Redesigned Homer magnetic hand sweeper is easy to move and maneuver, and its cleaning is simplified. It picks up nails, shavings and other types of ferrous scrap found in factory aisles, loading areas, garage floors and other locations. Sweeping widths of 12, 18, 24 and 36 in. are available. Sweeper has cast main housing, lightweight handle, plastic grips and semipneumatic tires. Made by **Homer Mfg. Co.,** Dept. 124, Lima, O.

▲ For more details circle NED-54 G7 on enclosed inquiry slip ▲

PROTECT LIVES . . .
Guard Against Property Damage

M&M RAIL CLAMPS

For car stops, on loading platforms, temporary sidings, railroad ferries, under tipples, for cars on grades and traveling cranes.

Used and recommended by leading Steel Companies, Manufacturing Plants, Mines, Grain Elevators, Cement Plants and Quarries.

WRITE FOR BULLETIN NO. 34

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

▲ For more details circle NED-55 G7 on enclosed inquiry slip ▲

Now! feed parts automatically with

Feedall

ELEVATING FEEDERS — For fully automatic feed and orientation of rolling or sliding parts

HOPPER FEEDERS — For high production with minimum handling.

BAR FEEDERS — For continuous feed 5 to 20 fpm. Completely self-contained units with variable speed.

TO CUT COSTS: ADD COMPLETE AUTOMATIC FEED ON FAST PRODUCTION MACHINES

Feedall Automatics have now been used with exceptional results to feed gear blanks, valve plugs, steel or plastic bushings, bars up to 1-1/2" x 30" long, and scores of widely varied parts. These time and cost-saving machines add storage capacity, save manpower, boost production, cut unit costs. And engineering design is outstanding.

NEW CATALOG contains all data, includes estimate sheet. Write for your copy today.

Feedall *Producers of automatic feeding devices*
FEEDALL, INC. • WILLOUGHBY, OHIO

▲ For more details circle NED-56 G7 on enclosed inquiry slip ▲

Here's an Easier way to handle your Blueprints!

This new, wall-type

Martin Sheet File System

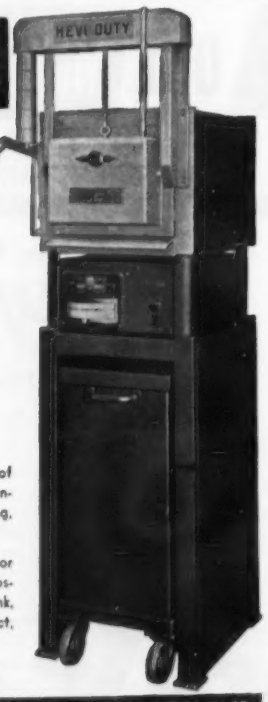
enables you to work with a large number of blueprints more efficiently and neatly because each sheet hangs flat. When not in use, the sheet hangers fold flat against the wall, resulting in a minimum of storage space. A unique feature is the new spring clips which hold sheets firmly and permit quick and easy removal of sheets at any time. For complete information on how a Martin File System can solve your blueprint problems,
Write to Dept. NED.

Units are available in 2 sizes, Model #30 at $49.50 holds sheets up to 30" wide, and Model #42 at $63.80 holds sheets up to 42" wide. Both sizes have a gray hammertone finish.

Fort Pitt Fixture Company
2056 W. LIBERTY AVE. PITTSBURGH 26, PA.

▲ For more details circle NED-57 G7 on enclosed inquiry slip ▲

TREET-ALL
the HEVI DUTY
Multi Purpose
FURNACE
for
TOOL ROOM AND EXPERIMENTAL HEAT TREATING



With a maximum temperature of 1850° F., the TREET-ALL can easily handle your scale free hardening, carburizing, dry cyaniding and silver brazing.

The alloy muffle and gasketed door form a tight seal which simplifies atmosphere control. The furnace, quench tank, cabinet and controls form a compact, completely wired unit.

Write for Bulletin HD-1147-BB

HEVI DUTY ELECTRIC COMPANY
HEAT TREATING FURNACES HEVI-DUTY ELECTRIC EXCLUSIVELY
DRY TYPE TRANSFORMERS — CONSTANT CURRENT REGULATORS
MILWAUKEE 1, WISCONSIN

▲ For more details circle NED-58 G7 on enclosed inquiry slip ▲

FIRST CLASS
PERMIT NO. 36
Cleveland, Ohio

BUSINESS REPLY ENVELOPE
No Postage Stamp Necessary if Mailed in the United States

—4c POSTAGE WILL BE PAID BY—

New Equipment Digest

Penton Building

CLEVELAND 13, OHIO

Only those having an engineering, specifying or buying title and connected with a company listed in Dun & Bradstreet as a manufacturer or processer are qualified to receive NEW EQUIPMENT DIGEST on our regular mailing list. The only exceptions to this rule are key men of railroad, steamship and other transportation firms. NEW EQUIPMENT DIGEST is not sent to salesmen, representatives or other distributors.

Only inquiries from individuals who qualify under the above classifications will be serviced if sent to us.

Important

Because we must check the distribution of NEW EQUIPMENT DIGEST at least once each year, please fill-in completely the coupon at the right. If you returned one of our regular mail questionnaires or an inquiry within the past year, you may omit this. The information you give will be held confidential and used only for verifying or correcting our circulation list.

PLEASE FILL IN COMPLETELY—PRINT OR TYPEWRITE

Please send NEW EQUIPMENT DIGEST to me each month free of charge.

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Principal Products Manufactured _____

_____ Approximate Number of Employees in Plant _____

Also send NEW EQUIPMENT DIGEST free to the following men in our company:

NAME _____ TITLE _____

NAME _____ TITLE _____

USE THIS SELF-MAILER FOR MORE INFORMATION

FOLD—SEAL—MAIL

SECOND FOLD TO THIS LINE

Circle the Numbers Below corresponding to items on which you want additional information. Your request will be sent promptly to the manufacturer. Please fill in the coupon completely. We'll pay the postage.

	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
1	51	101	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951	1001	1051	1101	1151	1201
2	52	102	152	202	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152	1202
3	53	103	153	203	253	303	353	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153	1203
4	54	104	154	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
5	55	105	155	205	255	305	355	405	455	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205
6	56	106	156	206	256	306	356	406	456	506	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156	1206
7	57	107	157	207	257	307	357	407	457	507	557	607	657	707	757	807	857	907	957	1007	1057	1107	1157	1207
8	58	108	158	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208
9	59	109	159	209	259	309	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109	1159	1209
10	60	110	160	210	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960	1010	1060	1110	1160	1210
11	61	111	161	211	261	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211
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18	68	118	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218
19	69	119	169	219	269	319	369	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219

FOLD BOTTOM EDGE TO THIS LINE

20	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220
21	71	121	171	221	271	321	371	421	471	521	571	621	671	721	771	821	871	921	971	1021	1071	1121	1171	1221
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49	99	149	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199	1249

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NEW EQUIPMENT DIGEST

A PENTON PUBLICATION

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Principal Products Manufactured: _____

Approximate Number of Employees in Plant: _____

Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

USE THIS SLIP FOR JULY, 1957 ISSUE ONLY

G-7

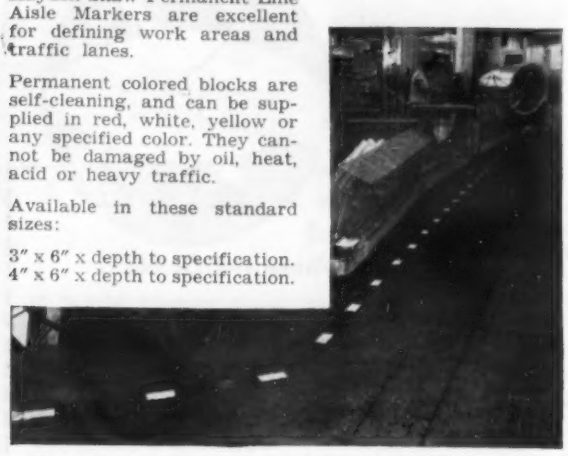
Colored AISLE MARKERS
Eliminate Aisle Marking Problems

Hayden-Shaw Permanent Line Aisle Markers are excellent for defining work areas and traffic lanes.

Permanent colored blocks are self-cleaning, and can be supplied in red, white, yellow or any specified color. They cannot be damaged by oil, heat, acid or heavy traffic.

Available in these standard sizes:

3" x 6" x depth to specification.
4" x 6" x depth to specification.



The Martin Company of Baltimore, Maryland, is using permanent colored aisle markers with creosoted wood block flooring as illustrated.

HAYDEN-SHAW MINERAL PRODUCTS
7814 W. Jefferson
Detroit 17, Michigan

For more details circle NED-59 G7 on enclosed inquiry slip

SMOOTH but plenty tough!

WENDT-SONIS tools cut fast and clean . . . stay sharp

The difference is in the finish!
All Wendt-Sonis drills, reamers, counterbores and other round tools are 30% smoother by profilometer readings. Flo-Finish, an extra operation applied after final grinding, practically eliminates grinding marks.

30% smoother Flo-Finish reduces chip friction—permits faster chip flow away from cutting edges — faster feeds and speeds. Lower chip friction also means less tool-damaging heat with a resulting increase in tool life. In addition, less power is required, and work finish is improved — in some cases by an average of 50%.

Micro-photograph (right side) shows how Flo-Finish eliminates grinding marks.

For detailed information on Wendt-Sonis tools, for competent technical assistance on tooling problems, see your Wendt-Sonis distributor's salesman.

Send for free 94-page Catalog No. 55— Address Dept. NED- 757

WENDT-SONIS COMPANY
HANNIBAL, MISSOURI • ROGERS, ARKANSAS

For more details circle NED-60 G7 on enclosed inquiry slip

A NEW FASTENER...A NEW TYPE OF FASTENER

DIE-CAST ROUND-HEAD THUMB NUTS & SCREWS with GRC's exclusive WIDE GRIP feature

3 standard diameters: ½", 5/8", ¾"; standard thread sizes: #4 through ¼"; both open-end and closed-end thumb nuts; thumb screws with and without shoulders.
Generous width, rounded edges assure firm, comfortable grip.

Mass produced in rust-proof zinc alloy at low cost, with eye appeal to help sell your product.

As in all other GRC quality fasteners—wing nuts, cap nuts, wing screws—threads are clean and accurate.

Write today for prices and bulletin, or ask for quote on special needs.

GRIES REPRODUCER CORP. GRIES
World's Foremost Producer of Small Die Castings
143 Beechwood Ave., New Rochelle, N. Y. • NEw Rochelle 3-8600

For more details circle NED-61 G7 on enclosed inquiry slip

ALUMINUM SCOOP
ribbed blade is heat treated

Fire-hardened 27-in. long northern white ash handle of the Tru-Lite aluminum scoop resists wear, weather and vermin. Redesigned model is made of an Alcoa aluminum alloy which is stronger and more wear resistant than previous aluminum used. Scoop has a D-handle, aluminum rivets and a heat treated, ribbed blade. Made by **True Temper Corp.**, Dept. NED, 1623 Euclid Ave., Cleveland 15, O.

For more details circle NED-62 G7 on enclosed inquiry slip

TIMING RELAY
redesigned for compactness

Measuring only 2½ in. wide by 7⅝ in. high, this compact Class 9050, Type B pneumatic timing relay is designed for use in limited space of machine tool control panels and other industrial applications. Adjustable timing range is 0.2 seconds to 3 minutes. It is quickly converted to on or off delay without tools. It is usable on up to 600-v circuits. One or two double-circuit interlocks can be supplied. Made by **Square D Co.**, 4045 N. Richards St., Milwauke 12, Wis.

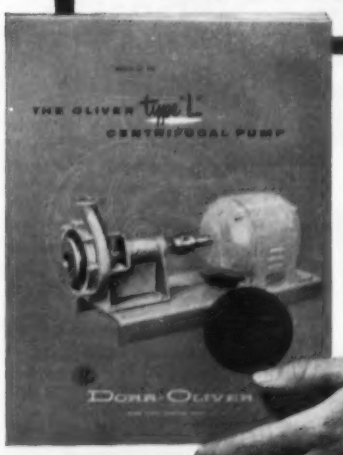
For more details circle NED-63 G7 on enclosed inquiry slip

STEP & PLATFORM LADDER
in 5 and 7-ft aluminum models

User of heavy duty aluminum combination step and platform ladder can mount from either side and cross over to the opposite side. Ladder has extra strength of full 3-in. rails on both back and front. The 14 x 22-in. platform has aluminum diamond thread flooring and is reinforced with 1½ x 1½-in. aluminum angles. Top step can serve as a work seat for prolonged jobs. Cadmium plated steel hinges are provided at top of extruded aluminum side rails and rubber safety shoe pads on the bottom of the rails. Standard sizes are 5 and 7 ft, with other sizes available on order. Made by **Louisville Ladder Co.**, Dept. NED, 1101 W. Oak St., Louisville 10, Ky.

For more details circle NED-64 G7 on enclosed inquiry slip

for corrosive transfer service . . . an outstanding alloy metal pump



The positive advantages of this "application engineered" pump . . . a natural for corrosive transfer service are outlined in Bulletin No. 310. You'll want to have this information. Write for a free copy today.

DORR-OLIVER INCORPORATED
WORLD-WIDE RESEARCH • ENGINEERING • EQUIPMENT
STAMFORD • CONNECTICUT • U.S.A.

For more details circle NED-65 G7 on enclosed inquiry slip

The answer to precision speed control

HANNA Flo-Set Speed Control Valves

For precision control of cylinder speeds, Hanna offers a line of Flo-Set Valves ¼", ⅜", ½" and ¾". Micrometer graduations in hundredths of a revolution permit precision regulation of flow. Speeds of forward and reverse piston strokes may be independently controlled. For light piping and tubing, there's a ¼" Flo-Set Jr. Valve, without micrometer markings.

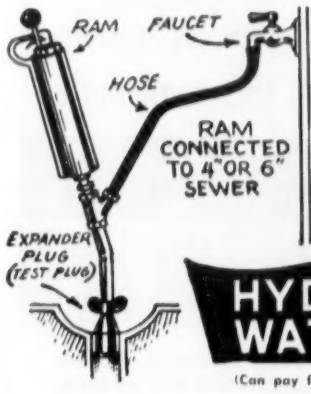
Hanna Flo-Set Valves are suitable for air, oil or water control, with maximum pressure to 250° p.s.i. and temperature to 250° F. They may be mounted in any position.

WRITE FOR FREE NEW BULLETIN 253A
It gives complete details and specifications on Hanna Flo-Set Valves.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT • CYLINDERS • VALVES • RIVETERS
1759 Elston Avenue • Chicago 22, Illinois

For more details circle NED-66 G7 on enclosed inquiry slip

Enjoy 30 Day Free Trial!



Easily clears the most stubborn drain and sewer stoppages

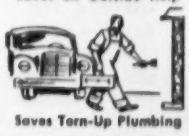
The ideal plumbing service tool for maintenance men!

Comes equipped with self-contained compressor and drain adaptors in 6 sizes!

HYDRAULIC WATER RAM
(Can pay for itself in one application!)

Why lose time, suffer inconvenience, waste dollars on needlessly costly plumbing service? The Hydraulic Water Ram clears severest blocked drain lines and sewers in minutes. No chemicals, no snakes, no electric cables, no pushing through. Saves costly outside help, or expensive torn up piping. Uses IMPACT, (HYDROSTATIC) a basic scientific principle of POSITIVE HYDRAULIC POWER. Shatters hard grease, debris, other blockage into fragments easily flushed down to main. Works perfectly, vent or no vent! Services up to 6" pipe. Works perfectly on all types of clogged toilets, sinks, sewers, etc. Can pay for itself in a single application. Nothing to wear out. Good for a lifetime. Thousands in use, including over 3,000 in government agencies. You risk nothing. Write for details on how to get free 30 day trial at our expense.

Saves on Outside Help



Saves Torn-Up Plumbing

Write for Information, Prices, Details of Free Trial Offer!

HYDRAULIC MANUFACTURING CO.
Dept. NED-7 Kiel, Wisconsin

For more details circle NED-67 G7 on enclosed inquiry slip

NEW HANDBOOK OF SMALL TOOLS AND ACCESSORIES

Here is our new, enlarged catalog with 1375 different items listed and described — more than 230 illustrations. Such essential tools as cutters, vises, arbors, rotary tables, chucks, collets, master copy type and other tool room and production line necessities are all within the covers of this 52-page book. Yours without obligation on letterhead request.

A 8929-1/9-R

GEORGE GORTON MACHINE CO.
1907 Racine St. Racine, Wis.

For more details circle NED-68 G7 on enclosed inquiry slip

Nose! Throat! PARCHED? DUSTY?

YOU NEED . . .
Water-cooled

DUPOR No. 20

Double sponge filters, saturated with water before wearing, provide cool breathing even under hot, dusty or smoky conditions. Paint shops, foundries, steel mills, chemical labs, oil refineries, etc. have used and recommended this respirator for years. Regardless the industrial dust or fume hazard, here is an individualized air-conditioning unit that makes breathing safe for every worker. Get details! Sample sent $2.50 postpaid.

H. S. COVER, P.O. Box 2508
South Bend 14, Indiana

"Respirators for Industry since 1894"

For more details circle NED-69 G7 on enclosed inquiry slip

Select the Townsend tapping screw for your operation from this combination

From the variety of thread-forming, thread-cutting tapping screw shanks and slotted, Phillips recessed or hex head styles shown above, you can select the Townsend tapping screw best suited to your product and assembly equipment.

You can get Townsend tapping screws quickly, too, for most types are carried in extensive stocks situated in several locations.

For a stock list of the types and sizes available for immediate shipment and additional information on the economy of using Townsend tapping screws, write Townsend Company, P. O. Box 237-G, New Brighton, Pennsylvania.

Townsend Company

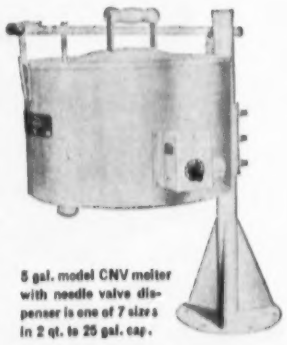
For more details circle NED-70 G7 on enclosed inquiry slip

DISPENSE MELTED COMPOUNDS ACCURATELY and FAST

To dispense many kinds of heated compounds, soft metals, resins, etc., a drop at a time or for continuous small flow, use the Sta-Warm "CVN" electrically heated compound dispenser. *Fast* acting, *easily* controlled.

Speed production. For special applications, variations of the "CNV" employ power agitators, overhead sling installation, bottom operated valves and similar modifications to meet your needs. All have thermostat controlled heat.

Write for catalog literature today



5 gal. model CNV melter with needle valve dispenser is one of 7 sizes in 2 qt. to 25 gal. cap.

"If You Can Wrap a String Around It, Sta-Warm Can Heat It for You."

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO
Subsidiary of ABRASIVE & METAL PRODUCTS CO.

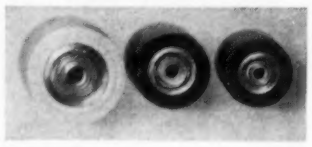
For more details circle NED-71 G7 on enclosed inquiry slip

CARBIDE DRILL
produces precision blind holes

Starbore carbide drill is designed to produce holes that intersect cross holes, recesses or cored areas; holes in laminated sections; and blind holes. The Center-Cut drill features a coolant hole placed sufficiently off center to prevent the forming of a pin during drilling. Carbide tip is a molded blank brazed to steel tubular shank. A typical drill will produce blind holes in cast iron to 0.0005-in. size tolerance at feed of 15 ipm. Surface finish in hole is 30 micro-inches rms. Drills are made to specifications in many lengths and diameters with straight or tapered shanks. Made by **Star Cutter Co.**, 34501 Grand River Ave., Farmington, Mich.

For more details circle NED-72 G7 on enclosed inquiry slip

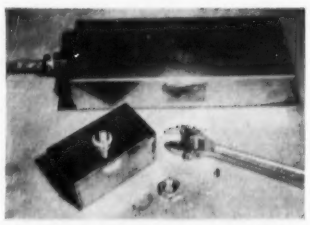
CUSHIONED BEARINGS
feature nonmetallic outer races



Stud, bore, flange and special bearings can be supplied with nylon, rubber or laminated phenolic tires, each of which minimizes noise during operation. Outer race materials can be molded or press-fitted to the basic steel outer race to assure wearability and quiet operation. Made by **General Bearing Co.**, Dept. NED 7, 47 Roselle St., Mineola, N. Y.

For more details circle NED-73 G7 on enclosed inquiry slip

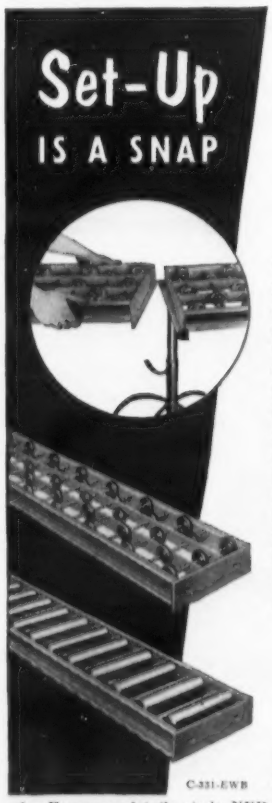
WATER-TIGHT TRANSDUCERS
cleaning areas up to 6 x 14 in.



Stainless steel housings of B and E series transducers have water-tight arc - welded joints to allow use of ultrasonic equipment with all types of active detergents, solvents, alkaline cleaners and some mild acids. The B series has Teflon-gasketed bulkhead mounting so that connection with cable from ultrasonic generator is made outside the tank. Completely immersible series E unit has pipe thread fitting with stainless steel adapter for insertion of Teflon-lined flexible stainless sleeve carrying the hot lead from transducer to outside junction box. Cleaning areas range from 3 x 5¾ to 6 x 14 in. With several units connected in parallel, up to 5 sq ft of transducer area can be driven from one Branson ultrasonic generator. Made by **Branson Ultrasonic Corp.**, Dept. NED, 40 Brown House Rd., Stamford, Conn.

For more details circle NED-74 G7 on enclosed inquiry slip

Set-Up IS A SNAP



C-331-EWB

with BUSCHMAN Portable Conveyors
FEATURING
"QUICK-EEZ" Coupling

Pick up . . . place . . . in line every time! With both ends the same, BUSCHMAN portable conveyor sections always match. No more swinging . . . no more shifting . . . no damaged hooks. Buschman "QUICK-EEZ" Coupling makes set-up or rearrangement a snap . . . saves time, space, labor . . . yet provides rigid support. Complete line in steel or lightweight aluminum. For conveyor convenience and flexibility, order BUSCHMAN! Immediate delivery from local dealer's stocks.

Write for Bulletin #15 today.

Produce more for less — Buschman Conveyors

THE E. W. BUSCHMAN CO.
4482 Clifton Ave., Cincinnati 32, Ohio

For more details circle NED-75 G7 on enclosed inquiry slip

Robot-Eye PHOTO ELECTRIC CONTROLS

designed for accuracy and dependability where it COUNTS!

ROBOT-EYE Photo Electric Controls incorporate many of the newest and most advanced features of electronic design and component miniaturization, for greater efficiency and versatility of application.

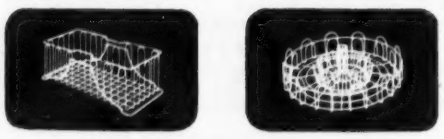
THESE ROBOT-EYE FEATURES MEAN A HIGHER STANDARD OF OPERATION:
- Light and cell unit—swivel mounted for easy installation.
- Miniature construction permits installation in tight places.
- Cell unit with cadmium sulphide cell has greater life and sensitivity.
- Simple plug-in provision in amplifier for light and cell unit.
- Light source utilizes low voltage bulb, operating below rated voltage for increased bulb life.
- Unit will follow counting operations up to 600 per minute.
- Robot-Eye unit works from either direct beam; reflection from object or mirror reflection.

MODEL RE-3 $65.00
MODEL REC-36 with 6 digit reset counter $89.00
For complete information write to: Dept. NED-P1-7

standard INSTRUMENT CORPORATION
DIVISION OF HEAT-TIMER CORPORATION
657 BROADWAY, NEW YORK 12, N.Y.

For more details circle NED-76 G7 on enclosed inquiry slip

Formed Wire Products



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WE DESIGN . . . all sizes, shapes . . . or we work from your design.
WE FABRICATE . . . from low carbon steel wire, flat or round to ½ inch diameter.
WE WELD . . . by resistance welding at all points of contact.
WE FINISH . . . by swaging all butt welds, beveling wire ends; zinc plating or polyvinyl coating in any color to your specifications.

We quote from your blueprints by return mail.
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Peerless FORMED WIRE PRODUCTS
PEERLESS WIRE GOODS COMPANY, INC.
2706 FERRY STREET · LAFAYETTE, INDIANA

For more details circle NED-77 G7 on enclosed inquiry slip

RECIPROCATING SOLENOIDS

R2D-328 SOLENOID OPERATOR

Reciprocating solenoids have the trade name of "RD Solenoid Operators."

DEFINITION

An RD solenoid operator is a reciprocating solenoid unit made up of two solenoids mounted in tandem to actuate a common plunger oscillating between them.

CLASSIFICATION AND DENOMINATION

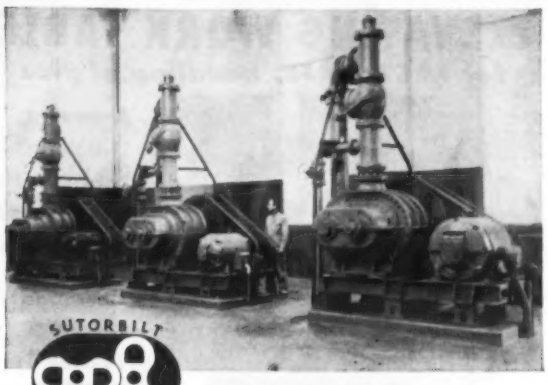
Class I. Plain RD operators for operation in open air.
Class II. Oil immersed, RDZ operators.
Class III. Explosion proof RDX operators.
Type 1. Two point operators R2D, R2DZ, R2DX.
Type 2. Three point operators R3D, R3DZ, R3DX.
Form A, side mounted, Form B, end mounted.

Operators available: RD-100, RD-300, RDX-300, RD-400, RD-700 and RD-800.

Ask for bulletins on operators, solenoids, solenoid brakes, Recipromotors and Semotors. See our catalogs in Sweet's Catalog Service.

TROMBETTA SOLENOID CORP.
329 N. MILWAUKEE ST. • MILWAUKEE 2, WIS.

For more details circle NED-78 G7 on enclosed inquiry slip



SUTORBILT IS WELL BUILT

SUTORBILT

BLOWERS • GAS PUMPS • VACUUM PUMPS

Special features, such as heavy duty roller bearings, wide face herringbone gears and the exclusive Sutorbilt timing hub are all designed to assure you trouble-free service and longer operating life. Simplicity of design and rugged construction are further plus values.

Standard units are available in capacities to 20,000 CFM and pressures or vacuums up to and including 10 psig.

Check the yellow pages of your telephone book for nearest representative. S-2A 4264

SUTORBILT CORPORATION

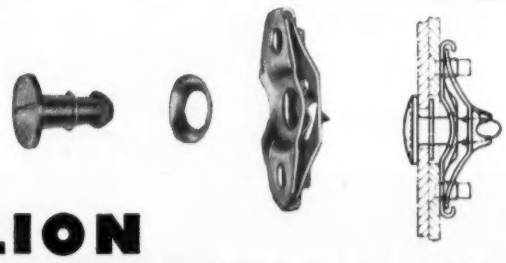
Subsidiary of Fuller Company • Catasauqua, Pa.

5200 E. 60 St. P.O. Box 269 • Maywood, Calif.

For more details circle NED-79 G7 on enclosed inquiry slip

one-quarter turn **CLOSED**

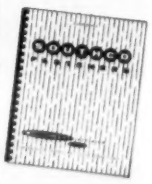
one-quarter turn **OPEN**



LION *Quarter-turn* FASTENERS

Quickly installed . . . for most rugged conditions of shear, tension and vibration . . . meet or exceed Army-Navy-Air Force Specifications MIL-F-5591A (ASG) and have Civil Aeronautics Administration approval. High strength-weight ratio. Full range of sizes and head styles.

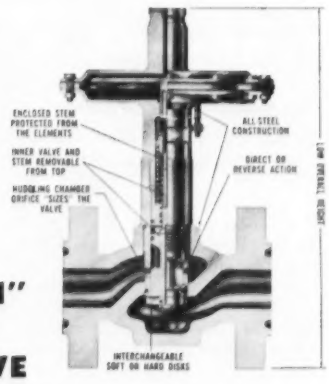
Send for your free copy of LION FASTENER CATALOG. Southco Div., South Chester Corp., 243 Industrial Highway, Lester, Pa.



SOUTHCO FASTENERS LION

©1956

For more details circle NED-80 G7 on enclosed inquiry slip



TYPE "DCB-1" MOTOR VALVE

Check this valve closely if you need automatic control of high pressure liquid or gas. It features a pressure-balanced disk that permits pressures to 10,000 psi to be controlled with one diaphragm @ 40 psi supply air. Valve positioners are not required . . . bubble-tight closure is guaranteed.

Catalog No. 256 MVC contains complete information on this and many other GOT Motor Valves. Write for your copy today.

Garrett Oil Tools, Inc.

P. O. BOX 2427 • LONGVIEW, TEXAS

USI DIVISION OF U. S. INDUSTRIES, INC. New York, N. Y.

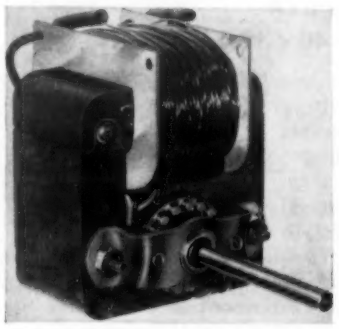
For more details circle NED-81 G7 on enclosed inquiry slip

MECHANICAL LIMIT STOP
miniature unit allows 40 revolutions

This miniature mechanical limit stop for use in production servo systems is a lead screw type unit which allows total travel of 40 revolutions. It can be set over its full range without removal from the system. Leaf spring stops protect delicate components and gears from jarring halts. Unit meets all applicable military environmental and vibrational specifications. Made by **Reeves Instrument Corp.**, Dept. NED, 207 E. 91st St., New York 28, N. Y.

For more details circle NED-82 G7 on enclosed inquiry slip

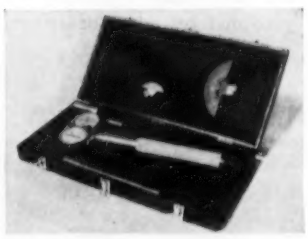
INDUCTION MOTOR
ratings from 1/300 to 1/50-hp



Type P single-coil two-pole induction motor is suited for fans, gearmotors, pumps and other applications. It is offered in various stacks and ratings from 1/300 to 1/50-hp. Free speed is 3400 rpm and load speed is 3000 rpm. Operation is on 115 v, 60 cycles ac. Made by **Heinze Electric Co.**, Dept. A, 685 Lawrence St., Lowell, Mass.

For more details circle NED-83 G7 on enclosed inquiry slip

TACHOMETER-STOP WATCH
time and motion are integrated



Accurate to one-tenth of 1 per cent, the Jagabi Tachoscope, a combined stop watch and revolution counter, eliminates the human element of error. Time and motion are automatically integrated, as both stop watch and counter are started and stopped at the same time. Rotational or lineal speed is then calculated. Minute dial is readable to 0.002-minute. New Tachoscope variations available include a basic instrument with a 1-to-10 ratio gear box for reading 0 to 10, 0 to 100, and 0 to 1000 on the counter dials. Another instrument (shown) has a handle for 6 and 12-in. diameter wheels for accurate measurement of length or feet-per-minute and rotational speed. Available from **James G. Biddle Co.**, Dept. 35-40-23, 1316 Arch St., Philadelphia 7, Pa.

For more details circle NED-84 G7 on enclosed inquiry slip

NAMEPLATES—INSTRUCTIONS—DIAGRAMS—WARNINGS—DECORATIONS

MARK IT PERMANENTLY—ATTRACTIVELY—WITH *Color*

AMERICAN DECAL PRODUCT MARKINGS

Applied with Production Line Speed

To assure more effective dependable product marking, American decals are laboratory formulated and tested to your specific requirements! The component materials of your product, the type of surface on which the decals are applied and the conditions to which the decal is subjected are all considered. Twenty-one "standard" American decal markings are available—or a special type may be formulated to better meet your needs.

FREE Write for Decal Nameplate Brochure and Samples

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755 PRINCE ROAD, WINDSOR, ONTARIO, CANADA
Sales Offices in All Principal Cities

For more details circle NED-85 G7 on enclosed inquiry slip

Double duty DOUBLE VALUE

Signals serve Safety!

A life saved or an injury prevented will more than pay for a signal or signalling system. Almost all FEDERAL signals for warning will do double duty! Additional utility from such devices is an ever available bonus for your foresight! Lights can be flashed intermittently to attract attention. Horns and bells can be coded to summon personnel. Sirens can be given short test blasts that also serve as start and dismissal signals. FEDERAL offers the widest variety of industrial signals for safety services and most of these can do double or even triple duty without impairing their primary safety function.

Our new bulletin 100 will make you an expert in selecting signals — ask for it today.

FEDERAL SIGN and SIGNAL Corporation

8711 S. State St., Chicago 19, Ill.

For more details circle NED-86 G7 on enclosed inquiry slip

HERE IS THE MEANS TO *Simplified* CODE MARKING

Mecco **SAFETY INSPECTION STAMPS** In AF Preferred Designs

For code dating, coding of specifications, identifying inspectors, workmen, shift, etc.—Mecco Safety Inspection Stamps are supplied in a wide variety of standard or special code designs. They are made in either Wedge-Grip or Hevi-Bevl styles to suit your requirements. *Write for complete data.*

A PRODUCT OF THE MARKING DEVICE INDUSTRY

Mecco SAFETY MARKING TOOLS **M.E.CUNNINGHAM CO.**

1055 CHATEAU STREET, PITTSBURGH 33, PA.

For more details circle NED-87 G7 on enclosed inquiry slip

Hardness Readings in 2 seconds!

Webster PORTABLE **Hardness Testers** FOR NON-FERROUS METALS

TWO LOW-COST MODELS differing in sensitivity for rapidly testing hardness of aluminum, brass, copper, etc. No training required; one hand operation. Hardness readings in 2 seconds anywhere in shop. Can be correlated to standard hardness scales. Quick reading dial. Special anvil design tests all shapes: sheets, extrusions, tubing, strip stock. Capacity ¼". Simple, rugged design, easy maintenance.

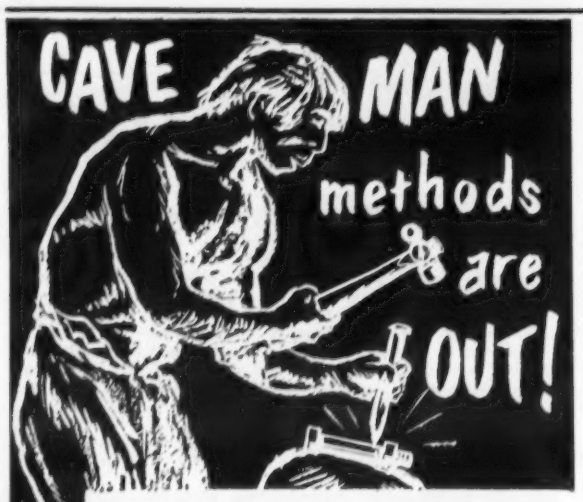
MODEL B Direct hardness readings on all aluminum alloys.

MODEL B-75 Direct hardness readings on copper, brass, etc.

Other models available

WEBSTER INSTRUMENT INC. DEPT. N, 11856 Mississippi Ave. Los Angeles 25, California.

For more details circle NED-88 G7 on enclosed inquiry slip



Modern industry uses KROIL

...when some stuck together part threatens production. They won't take a chance on breaking the part with brute strength.

KROIL LOOSENS FROZEN PARTS

As one customer said, **"Kroil loosens everything from an embalmer's needle to a bulldozer."**

Another wrote, **"Before trying Kroil on heat treat trolleys, we broke off every nut . . . since then we have not lost one."**

You, too, can get these results. Try Kroil on our make-good guarantee. Accept our combination offer, a gallon of Kroil, $4.00, and a Kroiler (squirt gun worth $1.50) for $4.95, F.O.B. Nashville. Order direct.

KANO LABORATORIES
1074 THOMPSON LANE • NASHVILLE, TENNESSEE

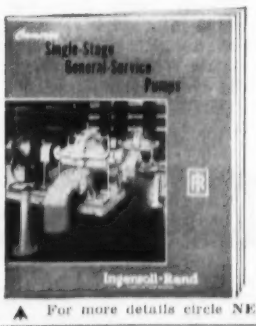
For more details circle NED-89 G7 on enclosed inquiry slip

need a pump that assures
LOW OVERALL COST

Look into these IR DOUBLE-SUCTION pumps for general hydraulic service

- High Efficiency
  plus
- Low maintenance costs
  mean

Lowest overall expense year after year



Heads: to 450 ft,
Capacities:
to 55,000 gpm.

Write for
Bulletin 7057-C

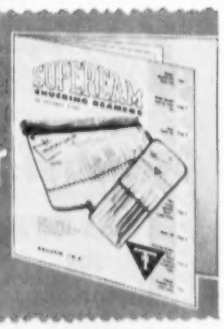
10-589

Ingersoll-Rand
11 Broadway,
New York 4, N.Y.

For more details circle NED-90 G7 on enclosed inquiry slip

this is it! 8 PAGES

One and Only
Decimal Reamer Catalog!



The world's greatest Reamer
SELECTION *by the thousand's*
BY STYLES • DIMENSIONS
RANGES • SELECTIBILITY
STOCK ITEMS • NET PRICES

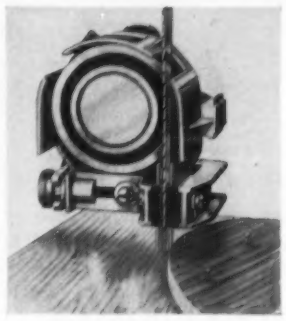
BUY SUPEREAM — The reamer that is sold and stocked in more sizes than any other reamer in the whole world.

TWENTIETH CENTURY MFG. CO., Box 429N, Libertyville, Illinois
GENTLEMEN: Send us the NEW SELECTIVE CATALOG No. 10A.
NAME _____ Firm _____
Address _____
City _____ Zone _____ State _____

For world's greatest selection of REAMERS!

For more details circle NED-91 G7 on enclosed inquiry slip

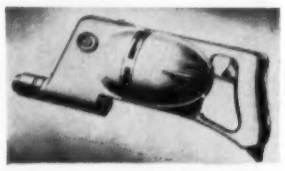
BANDSAW GUIDES
relocated to speed repetitive work



Templet pins on Carter bandsaw Micro - Guides have been moved forward, closer to the cutting point of the teeth, making it easier to follow the templet accurately in repetitive bandsawing operations. Blocks are made of hardened steel and pins of stiff, unbreakable rod. The templet pin blocks are available on all sizes of Micro-Guides. Made by **Carter Products Co.**, 421-A Wm. Alden Smith Bldg., Grand Rapids 2, Mich.

For more details circle NED-92 G7 on enclosed inquiry slip

ELECTRIC HAMMER
uses any of 40 different tools

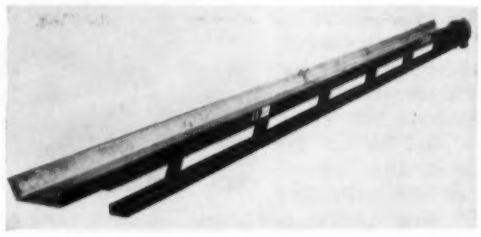


Slugger electric hammer simplifies drilling, cutting and chiseling in various hard materials. It can drill a ⅞-in. hole 1 in. deep in concrete in 30 seconds. The 7½-lb heavy duty tool has a quick-change chuck and will handle any of 40 different tools. Made by **Modern Mfg. Co.**, Dept. NED, Edgemont & Clementine Sts., Philadelphia 34, Pa.

For more details circle NED-93 G7 on enclosed inquiry slip

LIGHT DUTY CONVEYOR
4-in. deep pan for light materials

Oscillating action for the 4-in. deep pan of the model 36 light duty conveyor for light bulk materials is provided by a motor-driven eccentric shaft and steel



connecting arm. Conveyor sections are stocked in 4, 6 and 8-in. widths of 14-gage mild steel, and 10 and 12-in. widths in 12-gage steel. Sections are 5 and 10 ft long. Aluminum, stainless steel or abrasion resistant steel pans can be furnished. Lengths can be assembled up to 50 ft for use with one drive assembly. Overall height is 13 15/16 in. Motor requirements are ¾ to 1½ hp, 1200 rpm, depending on length. Made by **Simplicity Engineering Co.**, Durand 15, Mich.

For more details circle NED-94 G7 on enclosed inquiry slip

make hardness tests
ANYWHERE
WITH THE
NEWAGE TESTER

- CLAMPS, JAWS & BASE PLATE ARE ELIMINATED
- NO CONVERSIONS OR CALCULATIONS
- TEST ANY SIZE, SHAPE OR TYPE METAL
- NO SKILL REQUIRED
- SCALE READINGS IN ROCKWELL & BRINELL
- ACCURACY GUARANTEED

Many thousands used by industry and government. Write, wire or call for additional details and prices.

NEWAGE INDUSTRIES, INC.
222 York Road *Jenkintown, Pennsylvania*
TUrner 4-8494 *Dept. N.E.D.*

For more details circle NED-95 G7 on enclosed inquiry slip

ELEVATING WORK TABLE
for FAST, SAFE, handling of dies

A strong, husky, die table with big overload safety factor

2000 lb. capacity

NOW $245.00
f.o.b. Chicago

This "one man" die handler belongs in every machine shop

GREATER LIFTING RANGE

Sturdy, reinforced 24" x 36" table top elevates from 24" min. to 42" max. above floor.

Roller bearings in wheels and casters for easy moving. Floor lock included.

High and low speed crank studs at each end of table.

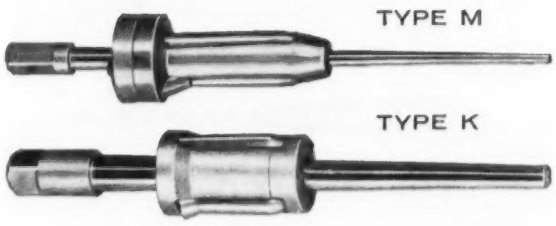
Order Today — Free Trial
Specify 10 day free trial with full credit return privilege.

ECONOMY HYDRAULIC ENGINEERING
4519 W. Lake St., Chicago 24, Ill.

For more details circle NED-96 G7 on enclosed inquiry slip

write for your copy of this Bulletin!

ELLIOTT
Boiler Tube Expanders
for tubes 3/4 in. I.D. and up



This 16-page bulletin describes general types of Elliott boiler tube expanders for fast, efficient tube rolling jobs. It also gives dimensions, prices and other descriptive data and shows various drum, header and short series mandrels which are used with Elliott boiler tube expanders. Drum mandrels are seen with Type M and Type K above.

Accessories available to adapt Elliott boiler tube expanders to various tube rolling applications include universal joints and extension shafts, sockets, gear drives, etc. A new heavy-duty, right-angle gear drive utilizes roller bearings to minimize friction, cutting down power losses.

RIGHT-ANGLE GEAR DRIVE ▸
Available in ½, ¾ and 1-in. sizes

Write the Elliott Company, Lagonda Division, Springfield, Ohio, *today*, for your copy of Bulletin Y-46.

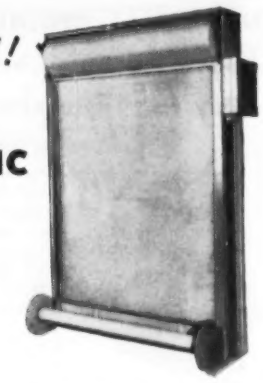
Y7-5A

ELLIOTT Company
For Tube Cleaners, Expanders and Accessories

STEAM TURBINES • MOTORS • GENERATORS
DEAERATING HEATERS • EJECTORS • CONDENSERS • CENTRIFUGAL COMPRESSORS • TURBOCHARGERS • TUBE CLEANERS • STRAINERS

For more details circle NED-97 G7 on enclosed inquiry slip

clean air by the roll!



Roll-O-MATIC

Filter introduces once-a-year maintenance

ROLL-O-MATIC is the new renewable air filter. Its filter curtain — a "blanket" of bonded glass fibers 5 ft. wide by 65 ft. long—compresses into a 13" diameter roll. Mounted at top of unit, media moves automatically down face of filter and is re-rolled at bottom.

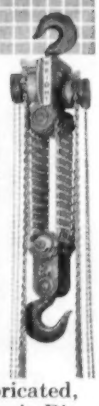
Under normal operating conditions, one roll of this low cost media represents a full year's supply for a ROLL-O-MATIC section up to 11 ft. high (18,000 cfm). For complete information, call your local AAF representative or write for Bulletin 248.

American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-98 G7 on enclosed inquiry slip

WRIGHT SAFEWAYS

Your Best Buy for Rigging and Maintenance Work



12 Sizes
½-ton to 50 tons

Bulletin 412A gives complete details on the many outstanding features that make Wright Safeways your best buy for long, trouble-free life. Write York, Pa. for your copy.

Some Safeway Features

Load Chain is finest alloy, every foot proof-tested...heat treated for hard wear-resistant working surface...ductile to withstand shock loads..."wick" lubricated...anti-rust zinc coat.

Load and Idler Sheaves rotate on life-lubricated, antifriction bearings...minimum of 5 pockets in Big Sheaves for efficiency and long life.

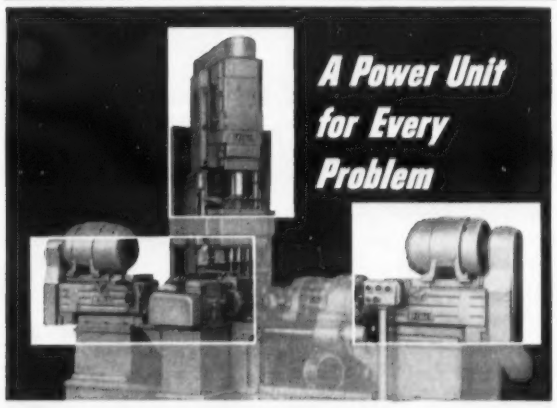
Gears, Pinions, Drive Spindle (also top and bottom Hooks) are nickel-chrome-molybdenum alloy steel mounted on heavy-duty, antifriction bearings. *Gear Train* is enclosed in oil-tight chamber.

Load Brake is Weston type, silent, dependable.

Steel Housing fully protects vulnerable parts.

Wright Hoist Division
AMERICAN CHAIN & CABLE ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

For more details circle NED-99 G7 on enclosed inquiry slip



Ex-Cell-O Quill-Type Hydraulic Power Units offer (1) easily controlled automatic cycles (2) smooth, powerful hydraulic operation and (3) flexibility. Re-arrange to perform different machining operations. Compact and dependable—they are perfectly suited to your production needs. For the complete story . . .

SEND FOR 20-PAGE BULLETIN

Bulletin 45352 shows typical applications, comparative specifications, installation drawings, extra equipment available etc.—complete information on Ex-Cell-O power units. Free, of course.

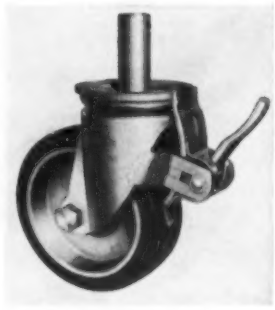
57-14

XLO **EX-CELL-O** CORPORATION
DETROIT 32, MICHIGAN

EX-CELL-O FOR PRECISION

For more details circle NED-100 G7 on enclosed inquiry slip

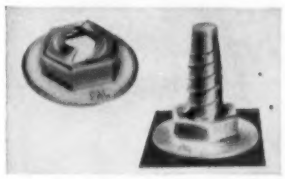
SCAFFOLD CASTER
brake locks swivel and wheel



Built for heavy engine stand, scaffold and general industrial loads, the FH900 stem type scaffold caster has a dual brake which simultaneously locks both swivel and wheel. It has a machined $3\frac{5}{16}$ x $1\frac{3}{8}$-in. steel stem, threaded for micrometer adjustment or swivel raceways. Large diameter, hardened ball bearings move in a lubricated, hardened raceway. Thrust bearings also move in a hardened and lubricated raceway. Hard or cushion tread 8-in. diameter wide-face wheels are offered. Made by **Faultless Caster Corp.**, Dept. NED, 1521 N. Garvin St., Evansville, Ind.

For more details circle NED-101 G7 on enclosed inquiry slip

LOCK NUT
self-threaded type



Made of spring-tempered steel, this lock nut cuts its own threads on die cast or cold forged studs of nameplates, medallions and moldings. It consists of a self-threading nut and flat washer in one piece, in sizes for ⅛, 3/16 and ¼-in. unthreaded studs. Hex form nut fits standard tools and shapes. Resilient washer base assures 360-degree contact on flat or irregular work surfaces and on perpendicular or off-angle studs. Nut is available plain or with bonded-in plastisol sealer. Free samples are available. Made by **Palnut Co.**, Dept. 45-L, Glen Rd., Mountainside, N. J.

For more details circle NED-102 G7 on enclosed inquiry slip

WELDING SHIELDS
portable units are self-supporting

Nearby personnel are protected from sparks, flash, flying chips and scale in welding operations by this line of Spa-Fla portable welding shields. They are self - supporting, flexible for forming to job requirements, and are easily rolled up for carrying. Application can be to floor, bench, machine and overhead welding, and to flame cutting, wire brushing, chipping and grinding operations. They are made of flameproofed canvas over a wire mesh frame in a range of sizes. Available from **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

For more details circle NED-103 G7 on enclosed inquiry slip

Where corrosion . . temperature . . pressure cause other valves to fail . . .

use **HOMESTEAD** *Lever-Seald* **PLUG VALVES**

THEY'RE "STICK-PROOF"

Operate Instantly . . Everytime . . Anytime

For more than 20 years, in practically every type of industry, HOMESTEAD LEVER-SEALDS have been giving trouble-free performance in services where extremes of temperature or pressure or corrosive line fluids cause ordinary valves to "stick" or "seize."

HOMESTEAD Lever-Seald PLUG VALVES are "Stick-Proof" because they're "Lever-Seald," which means that a powerful lever-and-screw device, built into every valve, assures positive action at all times under all conditions.

They operate fast, too—full open or closed by a quarter-turn; and because all operating parts are protected from line fluids, service conditions and weather, they last longer and cost less to maintain.

We make them in metals and alloys to suit your requirements in sizes 1½" to 12", for pressures from vacuum to 1500 lbs. and for temperatures ranging from 40° below zero to 1100° F.

WRITE TODAY for Valve Reference Book No. 39-3, No Obligation

HOMESTEAD VALVE MANUFACTURING CO.
"Serving Since 1892"
P. O. BOX 84 CORAOPOLIS, PA.

For more details circle NED-104 G7 on enclosed inquiry slip

AURAND

CLEANING TOOLS
ELECTRIC OR PNEUMATIC

Zip away **SCALE RUST PAINT**

Powerful rotary chipping action completely removes stubborn accumulations from iron, steel, brick, concrete, etc. with less effort. Adjustable depth shoe for controlling depth of cut. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write Dept. 14 for the money-saving facts.

AURAND MFG. & EQUIP. CO.
1210 Ellis St. • Cincinnati 23, Ohio

For more details circle NED-105 G7 on enclosed inquiry slip

solve many difficult control problems...use

OHMITE®
RHEOSTATS
with special features

Ohmite offers rheostats with a wide variety of *special features*. All have the distinctive Ohmite design features: smoothly gliding metal-graphite brush; all-ceramic construction; insulated shaft and mounting; windings permanently locked in place by vitreous enamel.

BUSHINGS FOR SPECIAL THICKNESS Extra-long bushings and shafts for panels up to 2" in thickness. Seven bushing lengths.

VENTILATED CAGES Used to prevent mechanical injury to the rheostat or human contact with electrically "live" parts.

TOGGLE SWITCH Is operated with a positive snap by the rheostat arm at either end position. Used for heavy-duty applications.

SPECIAL TANDEM ASSEMBLIES Ohmite Rheostats can be mounted with two, three, or more in tandem for simultaneous operation of several circuits by one knob.

SCREW DRIVER SLOT SHAFT Shaft ends can be slotted for operation with a screw driver where few adjustments are needed.

WITH OFF POSITION FEATURES Opens circuit at high or low resistance position with *snap-action* (illus.); opens circuit at high resistance position with *dead lug* off position; or has *dead section* off position.

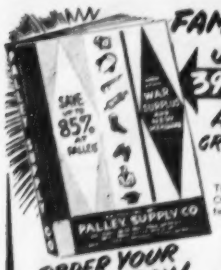
SENSITIVE SWITCH Opens or closes circuit with minimum movement of control knob shaft. Extremely dependable long life switch.

Write on Company Letterhead for Engineering Catalog

OHMITE MANUFACTURING COMPANY
3620 Howard Street, Skokie, Illinois

BE RIGHT WITH OHMITE®
RHEOSTATS • RESISTORS • RELAYS • TAP SWITCHES • TANTALUM CAPACITORS

For more details circle NED-106 G7 on enclosed inquiry slip



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396 PAGES PACKED WITH BARGAINS

ALL NEW 1957 CATALOG... GREATER THAN EVER BEFORE FULLY ILLUSTRATED

THOUSANDS UPON THOUSANDS OF INDUSTRIAL, COMMERCIAL AND CONSUMER ITEMS AT GREATER SAVINGS THAN EVER BEFORE! New Merchandise! Top Quality GOV'T SURPLUS!

Industrial & Building Supplies – Electrical Equipment – Motors, Generators, Portable Power Plants, Hand & Power Tools, Hardware, Fans & Blowers, Heating & Ventilating Equipment, Office Equipment to list but a few PLUS the GREATEST SELECTION of HYDRAULIC SUPPLIES we have EVER ASSEMBLED. Cylinders, Pumps, Valves, Motors, Fittings, Hose, etc., in genuine Gov't Surplus as well as our own high quality, custom made line. Its all in this amazing catalog!

ORDER YOUR COPY TODAY!

SAVE

2500LB. LIFT HOIST

Ideal for use in garage, shop, boat yard, farm, on trucks, etc. Has bronze, worm gear drive with 24 to 1 gear ratio and 3-speed crank. Comes with 18 feet of 3/16" high tensile strength, steel cable and free-spool, pullout clutch. 34.95

MOUNTING FRAME – for above Hoist 4.50

NOTE: We carry a complete line of hoists from small portables to huge, heavy duty types. Write for details.

NEW HYDRAULIC PRESS CYLINDERS

Specially designed for press work. Sturdy tie-rod construction. Operates at 3000 PSI. Has 2-1/2" shaft.

Part No.	Bore	Stroke	Length	Price Each
P5-4-30	5"	4"	10½"	$ 89.50
P5-8-30	5"	8"	14½"	105.00
P6-6-30	6"	6"	10½"	107.50
P6-8-30	6"	8"	14½"	127.50

The 5" diameter cylinders above will develop up to 30 TONS THRUST at 3000 PSI. The 6" diameter cylinders up to 43 TONS. Check others in our stocks.

UNIVERSAL JOINTS

Has a heavy duty, solid cast Bronze body. Rotates from 90° to 180° as desired. Has 29/32" diameter steel shafts with a ball and socket joint, in excellent condition. Ready-to-use!!! 5.95

Write TODAY for complete list of many other types of universal joints, hoists, hydraulics, etc.

SAVE ON STEEL CABLE

ALLOY STEEL — Finest quality Alloy Steel cable. Rust & corrosion resistant.

Size	Price per ft.
7 x 7 STRAND	
1/16"	5¢
3/32"	6½¢
7 x 19 STRAND	
1/8"	9½¢
5/32"	10¢
3/16"	12½¢
1/4"	13½¢
9/32"	16½¢

STAINLESS STEEL — Aircraft Quality. Rust & Corrosion Proof. You can not beat this Bargain.

Size	Price per ft.
7 x 19 STRAND	
1/16"	7¢
3/32"	14¢
5/32"	21¢
3/16"	25¢
7/32"	29¢
1/4"	38¢
5/16"	47¢

SPECIAL 180° OFFSET DRIVE

For use where tremendous power at slow take-off RPM is desired. Has 6 gears rotating on self-lubricating, hi-speed roller bearings. 85 to 1 gear ratio. Shafts are 1 1/4" and 3/8" diameter.

USED in good condition ONLY 5.95

NEW in excellent condition . . . NOW 8.95

SAVE ON NEW NYLON ROPE

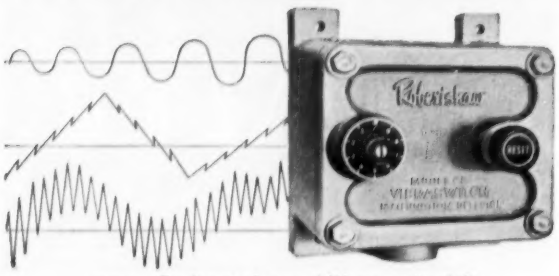
Very Finest Nylon Rope. Top Quality. Available in Sizes of 1/8" to 1" diam. Prices as low as 5¢ per running foot.

Palley's 2263 E. Vernon Ave. Dept. NED-77 Los Angeles 58, Cal.

Order from This Ad. Pay by M.O. or check. P.O.'s accptd. from O&B firms. ½ deposit with C.O.D.'s. All Prices FOB Los Angeles.

For more details circle NED-107 G7 on enclosed inquiry slip

PREVENTS HARMFUL VIBRATION



new Robertshaw Vibraswitch®
"Malfunction Detector"

Detects improper operation and anticipates component failures of rotating or reciprocating equipment

Actuates alarms or shuts down equipment when vibration exceeds the set limit

Responds to all kinds of vibration effects

Can ignore temporary, excessive vibration during start-up or normal operation

Simple and trouble-free . . . many types and housings available

SEND FOR BULLETIN

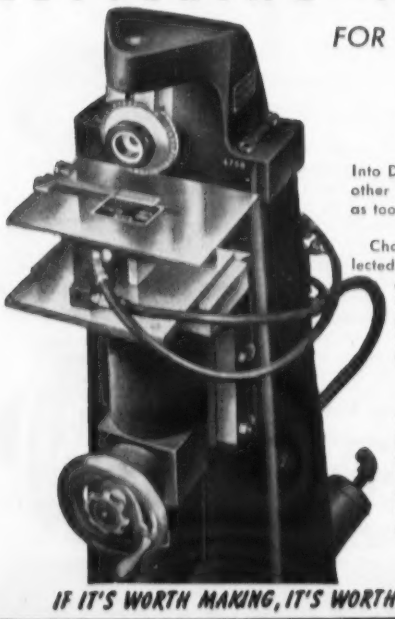
® patents pending

Robertshaw-Fulton CONTROLS COMPANY

FIELDEN INSTRUMENT DIVISION
Dept. F, 2920 N. 4th St., Phila. 33, Pa.

For more details circle NED-108 G7 on enclosed inquiry slip

PNEUMATIC POWER LETTERING PRESS



FOR STAMPING SELECTIVE LETTERING

Into DIE components and other metal parts such as tools, gauges and jigs.

Characters are selected by turning dial and are stamped into part when foot pedal is depressed. Spacing of characters is automatic.

Requires 20 to 40 pounds line pressure. Write today for further information on this or any other member of the famous GTS line.

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

GEO. T. SCHMIDT, INC.
1800 W. Belle Plaine Avenue
Chicago 13, Illinois

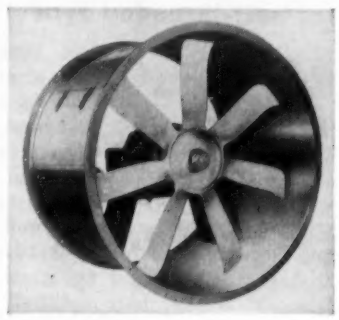
For more details circle NED-109 G7 on enclosed inquiry slip

LIQUID HOSE COUPLING
nut replaced without cutting hose

Liquid products under pressure are handled by the long shank type 800 liquid hose coupling. The swivel nut is secured to the non-slip corrugated shank by a built-in tie wire, eliminating hose cutting when replacing a worm nut. A cast-in flange prevents hose from interfering with swivel action. Full flow coupling is offered in 2-in. size with hex swivel nut and 3-in. size with pin lug swivel nut. Made by **Universal Valve Co.**, 470 South St., Elizabeth, N. J.

For more details circle NED-110 G7 on enclosed inquiry slip

INDUSTRIAL FANS
for use against static pressures



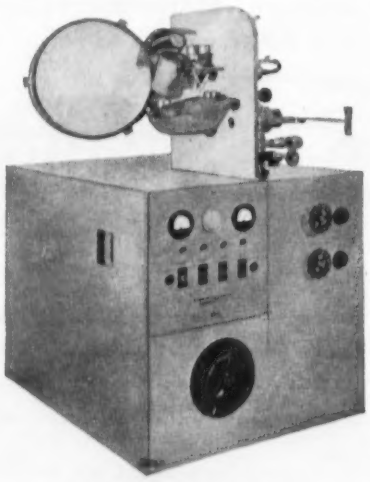
Effective up to 4 in. static pressure, SP-7 semipressure fans move a maximum amount of air at slow speeds with low horsepower requirements. Motors are rated for operation throughout the entire pressure range without overload. Fans use broad "machete" airfoil propellers with seven blades. Sizes from 14 to 60 in. diameter are available in direct connected, direct driven duct, belt driven duct, Bi-Flo duct and extended shaft types. Made by **Aerovent Fan Co.**, 700 E. Ash St., Piqua 52, O.

For more details circle NED-111 G7 on enclosed inquiry slip

SANITARY PUMP
intake and outlet are vertical

Base of this side-mounted sanitary pump for heavy viscous products provides for mounting with intake and outlet in a vertical position. Pump intake can be attached directly to the bottom outlet of tanks, vats, kettles or hoppers, eliminating flow - restricting elbows. Design permits handling of products containing whole or large particles without macerating or damaging them. Capacities range from 60 to 100 gpm in V-belt or variable capacity models. Made by **Waukesha Foundry Co.**, Dept. NE, Waukesha, Wis.

For more details circle NED-112 G7 on enclosed inquiry slip



NEW LOW COST VACUUM MELTING FURNACE

Compact packaged complete vacuum furnace with capacity 2 to 8 lbs. molten steel. Temperatures above 2000°. Pressures down to 10^{-3} mm Hg. Used for melting, purifying, alloying, casting as well as sintering, brazing, annealing, degassing, hardening and heat treating. Over 100 now in use for small parts production and development of materials with superior characteristics.

Write for Bulletin 2904-B

NRC EQUIPMENT CORP.

DEPT. 29G, CHARLEMONT STREET, NEWTON 61, MASS.

For more details circle NED-113 G7 on enclosed inquiry slip

INDUSTRIAL INCINERATORS
—Save Hauling Charges
—Pay for Themselves in 6 to 12 Months!

Model C-2-20 With incinerator burner

Save more than the price of a Winnen Incinerator! Eliminate those monthly charges for hauling refuse.

Avoid fire hazards and reduce your fire insurance premiums. Why take chances of spontaneous combustion, carelessly tossed cigarettes or matches?

Winnen heavy-duty incinerators burn wet refuse, dry or mixed. Your choice of fuels. No fuel needed to burn refuse 80% dry. Guillotine door is oversized for quick loading of cartons and crates.

Winnen incinerators can be installed indoors or out, take up little space. Combustion chamber is lined with heavy refractory material to withstand temperatures of 3000°F. Shell is heavy 10-gauge steel. Optional equipment is available, such as prefab chimney, automatic fuel control, etc.

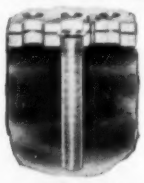
Four styles. Model C is available in 4, 10, 15, 20 and 30 bushel sizes. Ideal for burning refuse that is free from smoke and odors. Model C-2 and Model S are available in four sizes. The new Custom Wincinator is built in any size, on order. The C-2, S and Custom lines are equipped with secondary combustion chambers for smokeless-odorless operation. Ideal for use in municipalities where smoke and odor must be eliminated. They conform to the most rigorous building codes. All Wincinators are fully guaranteed one year.

Models C and C-2 are shipped knocked down with complete, easy-to-follow directions for installing. Any handy man can set up a Wincinator. No mason needed. Easy to relocate later if you wish.

Also available is a complete line of Prefab Chimneys. Send for further information. Write today to: **Winnen Incinerator Co.**, 932 Broadway, Bedford 10, Ohio. *Advt.*

For more details circle NED-114 G7 on enclosed inquiry slip

Micro-Inch



Yes – Delpark Filter-Matic

TUBULAR SCREEN VACUUM FILTER

5-1000 G.P.M. Flow Rates

The Filter-Matic gives filtration for super-finish grinding requirements with automatic, permanent element filtration.

Keeps coolant clean, free of contaminants . . . coolant temperature is lowered. Extends grinding wheel life, permits free-cutting action.

Write for more complete information on this newest concept in filtration.

Delpark —First in Filtration Advancement

INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVE. LEBANON, INDIANA

For more details circle NED-115 G7 on enclosed inquiry slip

WICKWIRE SPRINGS

Wickwire can fill your spring requirements no matter how exacting. For Wickwire makes:

All four types of springs (compression, extension, torsion and flat)...

From many materials (spring steels, alloys and non-ferrous metals)...

In a variety of finishes (Japanned, cadmium plated, nickel or zinc plated).

For complete details, write for Bulletin S-500 (Wickwire Springs and Formed Wires Catalog). Wickwire Spencer Steel Division, The Colorado Fuel and Iron Corporation, P.O. Box 551, Palmer, Massachusetts.

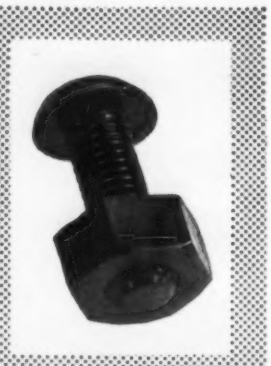
THE COLORADO FUEL AND IRON CORPORATION — Denver and Oakland
WICKWIRE SPENCER STEEL DIVISION
Atlanta • Boston • Buffalo • Chicago • Detroit • New Orleans • New York • Philadelphia

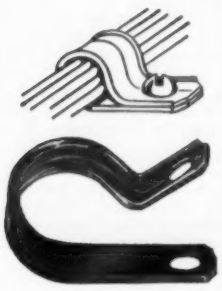
CF&I WICKWIRE SPRINGS AND FORMED WIRES
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION 5229

For more details circle NED-116 G7 on enclosed inquiry slip

molded Black Nylon screws and nuts

Insulate and Fasten without bushings, washers, etc. In Stock 4-40, 6-32, 8-32, 10-32 and ¼-20.





Black Nylon "NyGrip" cable clips

Light-weight non-conducting support for wiring, tubing, etc. In Stock 1/16" to 1½" Dia.

Free samples • write WECKESSER CO.

5707-09 Northwest Hwy. • Chicago 30, Ill.

For more details circle NED-117 G7 on enclosed inquiry slip

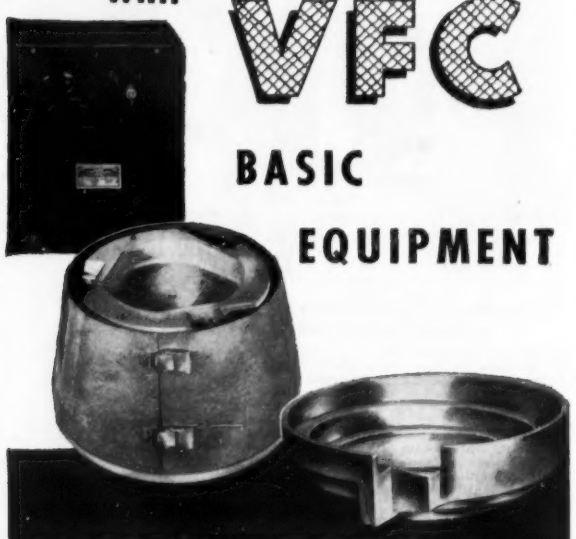
If You want to PRODUCE MORE

... develop Your

PARTS FEEDING

with VFC

BASIC EQUIPMENT



MOTIVATION ...

... AUTOMATION

VFC HAS A CHARTED COURSE THAT WILL HELP YOU!

The real impelling force at VFC, aside from developing better parts feeding equipment, is how to help industry produce more.

When one or more parts are scheduled for a rendezvous, you need parts feeders and VFC's technical knowledge of how they can be adapted to your product or production line. No matter what direction your business takes, use VFC's parts feeding know-how as the motivation to automation.

TECHNIQUES FOR ...

SIZES • SHAPES • MATERIALS

This tremendous storehouse of parts feeding information is available to you—make use of it and produce more—automatically. If you have a parts feeding job pending, the chances are the answer is in your VFC Sales Engineers Data Book, ask about it.

VIBRATORY FEEDER COMPANY

32nd and BRANDES STS., ERIE, PA. • PH 4-6320

Division of Automation Devices, Inc.

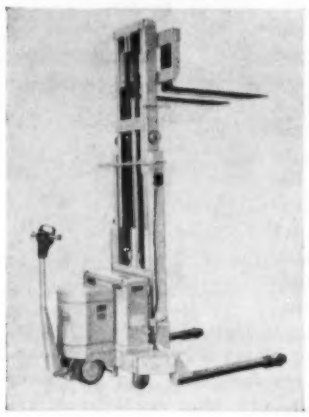
For more details circle NED-118 G7 on enclosed inquiry slip

ALL-ANGLE VISE
simplifies assembly operations

Readily adjusted to any angle and locked in that position, this Pana-Vise is especially suitable for assembly operations. It can also be used for wide range of maintenance and other work-holding operations in the shop. It swings 360 degrees on any tangent to a half-sphere and locks with a hand screw. Vise head is removable and a fixture or plate can be substituted. Jaw width and opening are 2½ in. List price is $14.95. Made by **Pacific Durable Products,** Dept. NED, 10107 Adella Ave., South Gate, Calif.

For more details circle NED-119 G7 on enclosed inquiry slip

STACKING TRUCK
straddle type lifts to 128 in.



Improved model KHL straddle type lift stacker is suited for use on limited capacity elevators and floors. Made in 2000, 3000 and 4000-lb capacities, it has a telescopic lift to 128 in., short turning radius, two driving wheels and braking with handle in any position. An automatic parking brake is optional. Power unit can be removed in 20 minutes. The Hydroelectric truck can be used with wing or double-faced pallets. Made by **Lift Trucks, Inc.,** 2427 Spring Grove Ave., Cincinnati 14, O.

For more details circle NED-120 G7 on enclosed inquiry slip

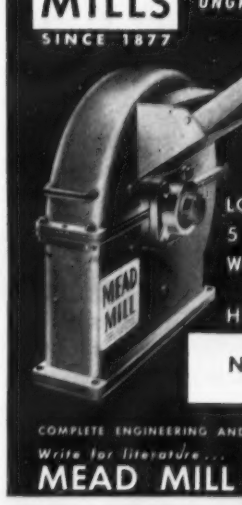
VARIABLE TRANSFORMER
portable unit for low wattage uses

Portable variable alternating current voltage source for 0 to 132 v, 1 amp, 132 va output is provided by the Powerstat transformer. Input is 120 v, 60 cycles, single-phase. It is housed in a 3½-in. high, 3½-in. diameter casting and has a 6-ft cord and 1-amp fused plug with two receptacles. Unit also has an on-off switch and a dial with well-defined graduations. Made by **Superior Electric Co.,** Dept. NED, 83 Laurel St., Bristol, Conn.

For more details circle NED-121 G7 on enclosed inquiry slip

MEAD IMPACT MILLS SINCE 1877

PULVERIZE GRINDABLE AND UNGRINDABLE MATERIALS



FAST CONTINUOUS PRODUCTION

QUIET

LOW MAINTENANCE

5 VERSATILE MODELS

WIDE RANGE of MATERIAL & PARTICLE SIZES

HIGH SPEED IMPACT

NEW MEAD 400

COMPLETE ENGINEERING AND INSTALLATION AVAILABLE

Write for literature ...

MEAD MILL COMPANY

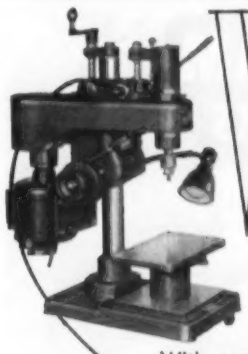
Dept. N

14736 CHARLEVOIX AVENUE

DETROIT 15, MICHIGAN

CONTRACT PULVERIZING AVAILABLE

For more details circle NED-122 G7 on enclosed inquiry slip



Varimatic®

THE SUPER SENSITIVE, SMALL-HOLE, PRECISION DRILLING MACHINE

"for the finest work you do"

With capacity of .004" to 3/16" in all drillable materials, and spindle speeds from 840 to 9500 R.P.M. infinitely variable in two speed ranges . . . this is the machine which the precision industries rely upon to handle the "heart-break jobs."

You will want FULL INFORMATION and we will be glad to furnish it.

Ask for our FREE BULLETIN NO. 2489

ADDRESS

THE HAMILTON TOOL COMPANY
901 Hanover Street
HAMILTON, OHIO

IT'S A Hamilton Tool

USE IT WITH CONFIDENCE

2489

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WARMS UP FAST!

The UNITRAP hits peak performance in seconds — a real production booster on intermittent operation and morning start-ups.

The Unitrap saves money on any operation. Large orifices and the exclusive Dual-Valv* provide tremendous capacity and reduce wire drawing. Universal pressure from 0 to 250 lbs. simplify parts and trap inventories — you simply order by pipe sizes (½" through 2"). Stainless steel working parts last indefinitely. For full information contact our nearest office or write for Bulletin 6000.

*Pat. Pending

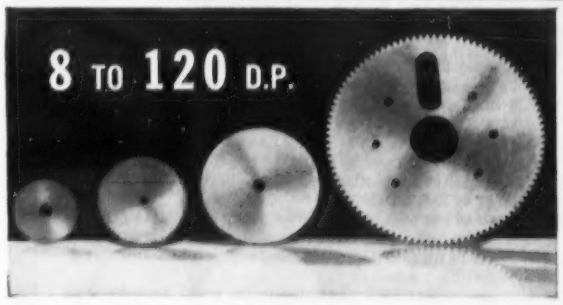
"WHERE Good Connections COUNT"®

PERFECTING SERVICE CO.

332 Atando Ave. Charlotte, N. C.

Baltimore—Camden, N. J.—Chicago—Cleveland—Los Angeles—New York—Providence—Montreal—Toronto

For more details circle NED-124 G7 on enclosed inquiry slip



LONG LIST OF STOCK GEAR DIES OFFERS YOU BIG SAVINGS!

ACCURATE STAMPED GEARS by *WINZELER* are BIG savers of time and money. Single stampings are laminated to wide faces at savings up to 60%! Further economies are made possible by a BIG range of *stock* Dies. Modern new plant, methods, and equipment now greatly increase production speed, efficiency and *economy!* Send blue prints. Tell us about your needs today. No obligation.

SEND FOR...

New list of WINZELER-made stock Gear Dies. Ask for it on company letterhead, *please!*

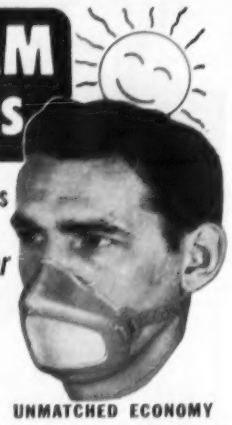
WINZELER Stamped Gears

WINZELER MANUFACTURING & TOOL CO.

7355 W. WILSON AVENUE • CHICAGO 31, ILLINOIS

For more details circle NED-125 G7 on enclosed inquiry slip

FLEX-A-FOAM DUST MASKS



Dust protection your workers will welcome and wear *in even the HOTTEST weather*

★ **Ideal for Hot Weather** Filter's porous action absorbs and actually exhales body heat.

★ Flex-A-Foam's lightweight (only 1 ounce complete) makes it cool and comfortable to wear — not hot and cumbersome like old-fashioned respirators.

★ Flex-A-Foam is easier to breathe and talk through than an ordinary pocket handkerchief — does away with that stuffy, smothered feeling.

Your best *Ounce of Protection* against Irritating Dust

UNMATCHED ECONOMY

Flex-A-Foam is the lowest priced *quality* respirator on the market today.

Flex-A-Foam's washable filter outlasts throw-away type by more than 100 to 1.

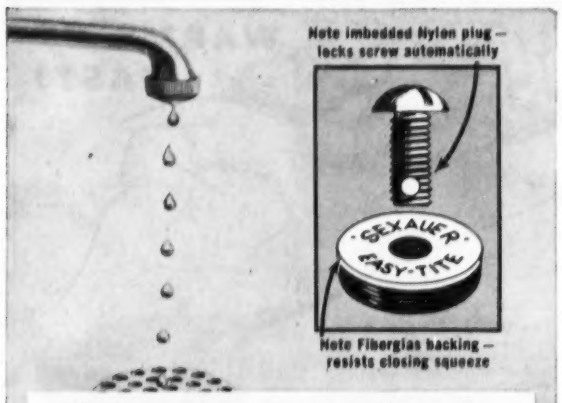
Fewer filter replacements with Flex-A-Foam Dust Masks mean fewer lost production hours.

Sample only $1.45 postpaid (Industrial price only)

FLEX-A-FOAM® DUST MASK

FLEXO PRODUCTS, INC. • Cleveland 13, Ohio

For more details circle NED-127 G7 on enclosed inquiry slip



Why Faucets Leak

...9 out of 10 washers are fastened with TOO LONG or SHORT ...screws. The screws QUICKLY LOOSEN, thus loose washers ...are destroyed thru grind and squeeze of opening and ...closing faucets.

34 years of research uncovers new solution

...Now, NEW (Patented) 'Sexauer' SELF-LOCK Monel screws, ...with an imbedded expanding NYLON PLUG, lock at the ...required depth AUTOMATICALLY—hold washers FIRMLY!

...Made of rustproof, non-corroding MONEL, heads don't ...twist off or screw slots distort. They are easy to remove ...when necessary, can be used over and over.

...Used with NEW 'Sexauer' EASY-TITE faucet washers, this ...combination outlasts past faucet repairs "6 to 1"! EASY-...TITES are made of super-tough, pliable du Pont compound ...(neither rubber nor fiber) and reinforced, like a tire, with ...a vulcanized layer of Fiberglas, they resist distortion and ...splitting from shut-off grind and squeeze.

The hidden costs of faucet leaks!

Faucet leaks are costly! As authenticated by Hackensack, N. J. Water Co. and American Gas Association, STOPPING just ONE PIN-HOLE SIZE (1/32") LEAK can reduce water waste 8,000 gal. quarterly. If a HOT WATER FAUCET LEAK, water and fuel savings JUMP to over $7.58 QUARTERLY—plus additional savings on MATERIALS—LABOR—and *costly* FIXTURE REPLACEMENTS!

NEW SELF-LOCK screws and EASY-TITE faucet washers are just TWO of the "SEXAUER" line of over 3000 TRIPLE-WEAR plumbing repair parts and Pat'd. precision tools.

A "SEXAUER" Technician in your vicinity will make our NEW 126 page Catalog "H" available. He will gladly consult with you regarding a SURVEY of your plumbing fixtures to determine correct repair parts required and establish reasonable stock levels that avoid both overstocking and shortages—thus providing for efficient stock arrangement and control—all without obligation. WRITE TODAY!

J. A. Sexauer Mfg. Co., Inc. Dept. AU-77
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your NEW, 126 page catalog "H."*

My name ..... Title .....

Company or Institution .....

City ..... Zone ..... State .....

SEXAUER

WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

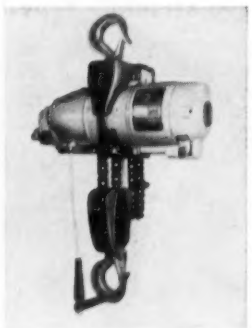
For more details circle NED-128 G7 on enclosed inquiry slip

FREE-WHEELING ATTACHMENT makes torque tool reversible

Self-contained mechanism embodied in this 5448 Rotahead free-wheeling attachment provides free-wheeling action in either direction. Unit makes any ½-in. drive handle, attachment, extension or torque tool instantly reversible. To change direction, head is pressed down. When released, 30 teeth engage for heavy torquing power. A new bite is possible every 12 degrees. Head measures 1 1/16 in. for use in restricted areas. Unit is ruggedly constructed of Protoloy steel by **Proto Tool Co.,** Dept. D, 2209 S. Santa Fe Ave., Los Angeles 54, Calif.

For more details circle NED-129 G7 on enclosed inquiry slip

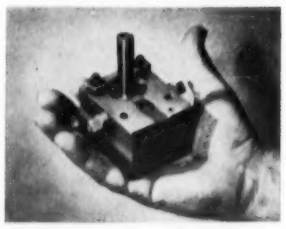
AIR-POWERED HOIST has 4000-lb capacity



Fitted with either roller or link chain, this 4000-lb capacity air-powered hoist will lift or lower full load at speed varying from a creep to 10 fpm. Lift of 8 ft is operated by either one-hand control bar or remote pendent control. Axial-piston compressed air motor assures positive starts and stops and prevents motor burnouts during stalls. Centrifugally governed mechanical brake prevents slippage. Unit weighs 100 lb and has swivel-mounted safety suspension and load hooks. Accessories include trolleys for hoist and air hose, chain basket with 20-ft capacity, filter-regulator-lubricator and a nonsparking kit to adapt hoist for explosive atmospheres. Made by **Gardner-Denver Co.,** Keller Tool Div., Dept. N, Grand Haven, Mich.

For more details circle NED-130 G7 on enclosed inquiry slip

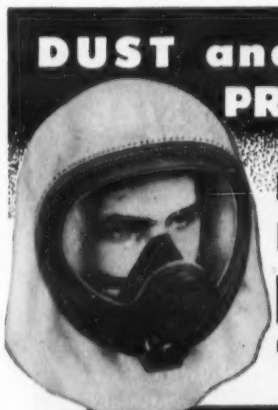
HYDRAULIC PUMP wet sump, 1000-psi, low volume unit



Rated capacity of the model 1000 wet sump hydraulic gear type pump is 0.5-gpm at 1000 psi at 1800 rpm. Compact, low cost unit has hardened steel and bronze gears, the latter ball bearing mounted at both ends. All wearing surfaces are hard chrome plated. Designed for use within a reservoir, it is available in sealed adaptations for external mounting. Made by **Detroit Testing Machine Co.,** 9394 Grinnell Ave., Detroit 13, Mich.

For more details circle NED-131 G7 on enclosed inquiry slip

DUST and SPRAY PROTECTION



BROAD VISION RESPIRATOR HOOD

Pat. No. 2537265 . . . Fitted with U.S. Bureau of Mines Approved type respirator

WEIGHS ONLY 11 OUNCES

Lighter. Cooler. Unobstructed vision in all directions. No interference with work to be performed. Used to advantage on many maintenance and production operations.

WRITE FOR BULLETIN NO. 32

IPCO *Safety Equipment for all Industries*

INDUSTRIAL PRODUCTS COMPANY

2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-132 G7 on enclosed inquiry slip

you can **DIAL** your **ADJUSTMENT** on this **AGASTAT®** time/delay/relay

Frequent time adjustments are no problem with the dial head available on AGASTAT time/delay/relays. They provide a complete range of adjustment with 1 revolution of the dial. Dial markings permit easy calibration for accurate adjustment. And you can spot each of the 4 timing ranges quickly because they are color coded: blue from 30 seconds to 15 minutes; red from 10 seconds to 2 minutes; yellow from 0.1 to 10 seconds; white from 0.1 to 3 seconds.

Like all AGASTAT relays, units with dial heads are solenoid actuated, pneumatically timed. Each model is available with either dial head or needle valve adjustment. Where frequent readjustment of timing is necessary, dial head adjustment should be specified. For bulletin on all popular AGASTAT time delay relays, write to: Dept. A28-75

AGA DIVISION

Elastic Stop Nut Corporation of America

1027 Newark Avenue, Elizabeth, New Jersey

Pioneers in pneumatic timing

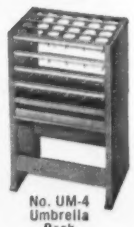
For more details circle NED-133 G7 on enclosed inquiry slip

The OFFICE VALET® *Lockerette*

Combines the best features of both lockers and coat racks.

Wraps are exposed to air and light. Employees do not face the weather in damp wraps that have been crumpled in dark lockers—do not eat soggy lunches, soaked by wet hats or gloves. Each person has his own spaced coat hanger, ventilated hat shelf and 12" x 12" x 15" deep lock box for lunches, tools and personal effects. Improves health and morale—lower absenteeism.

Lockerettes save space too . . . the No. 6-12 (2-column) accommodates 12 people in 6 feet; the No. 9-18 (illustrated) accommodates 18 in 9 feet.



No. UM-4 Umbrella Rack

WRITE FOR BULLETIN LO- 8

VOGEL-PETERSON CO. 1121 West 37th St. Chicago 9, Ill.

For more details circle NED-134 G7 on enclosed inquiry slip

HOT SPOT LUBRICATION

Choose from a series of Houghton HI-TEMP oils, for low-cost, dependable lubrication up to 500°F. and more. Especially developed to outperform ordinary oils and solid lubricants, HI-TEMP oils keep hot bearings clear of troublesome carbon. Bearings don't seize or wear excessively. Downtime for maintenance is reduced. You get a superior lubricating job at a low operating cost.

Get complete data on these outstanding oils from your Houghton Man—or write directly to E. F. Houghton & Co., 303 West Lehigh Avenue, Philadelphia 33, Pa.

HI-TEMP OILS . . . products of

E. F. HOUGHTON & CO.

PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .

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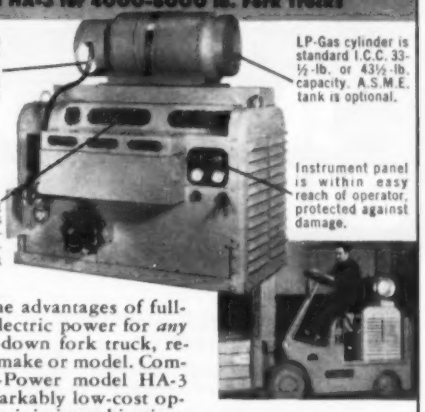
Ready-Power LPG-Electric Power Unit for Sit-Down Trucks

Model HA-3 for 4000-6000 lb. Fork Trucks



Now, get the advantages of full-time LPG-electric power for *any* electric, sit-down fork truck, regardless of make or model. Compact Ready-Power model HA-3 assures remarkably low-cost operation . . . minimizes objectionable fume problems. LP-Gas cylinder is top-mounted for quick, easy interchangeability. Hinged cover and side plate give easy access to engine accessories; removable end plate for service of generator. LP-Gas components are listed by Underwriters' Laboratories and comply with Factory Mutual recommendations. Write today for full information.

READY-POWER

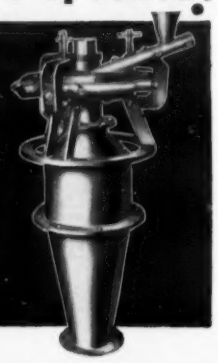
The READY-POWER Co., 3832 GRAND RIVER AVE., DETROIT 8, MICH.

Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

For more details circle NED-136 G7 on enclosed inquiry slip

MICRON-GRINDING speeded!

STURTEVANT MICRONIZER* GRINDING MACHINES REDUCE PARTICLES TO MICRON SIZES AT RATES FROM ½ LB. TO 3000 LBS. PER HOUR . . . WITH NO ATTRITIONAL HEAT



NO MOVING PARTS! Particles grind each other. High speed rotation and violent impact are caused by jets of compressed air or steam. Centrifugal force keeps over-sized particles in grinding zone. Cyclone action in central section classifies and collects fines for bagging.

EASY TO CLEAN AND MAINTAIN! All seven sizes of Sturtevant Micronizer* Grinding Machines are constructed for instant accessibility (typified by the "OPEN-DOOR" design in other Sturtevant equipment).

WRITE FOR BULLETINS on Sturtevant Micronizer* Grinding Machines and other custom-built equipment listed below. STURTEVANT MILL CO., 114 CLAYTON ST., BOSTON 22, MASS.

STURTEVANT

Dry Processing Equipment

The "OPEN-DOOR" to *lower* operating costs over *more* years

CRUSHERS • GRINDERS • MICRON-GRINDERS • SEPARATORS
BLENDERS • GRANULATORS • CONVEYORS • ELEVATORS

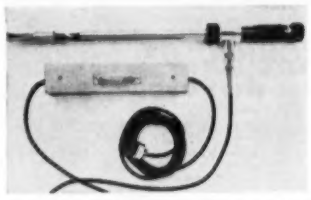
For more details circle NED-137 G7 on enclosed inquiry slip

SMALL WORK POSITIONER supports 15-lb work load at 6 in.

A small version of the PowRarm work positioners, this Veep positioning fixture is designed for electronics assembly, or other small assembly work. It can be used with vises or special work holding attachments to move work to any position in all three planes. The ½-in. female socket with set screw, at the end of the shank, provides for fast attachment of work-holding fixtures. The Veep has a cadmium-plated steel body and will support 15-lb work load at 6 in. It weighs about 3 lb and is priced at less than $10.00 per unit. Made by **Wilton Tool Mfg. Co.**, Dept. NED, 9525 Irving Park Rd., Schiller Park, Ill.

For more details circle NED-139 G7 on enclosed inquiry slip

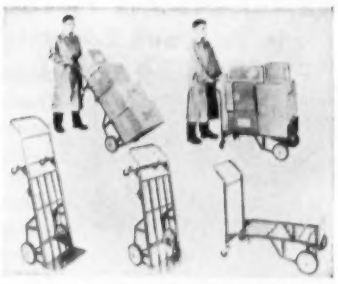
INSPECTION DEVICE for inside of tanks, vessels



Internal inspection of tanks, vessels and combustion chambers can be done with this 10 X borescope which has 9-in. diameter field of vision at distance of 24 in. Adjustable mirror is controlled by hand wheel to allow scanning from retrospective through right angle to forward oblique. Large field of view makes it easy to detect flaws, pits, cracks or deterioration. Viewing head has 13/16-in. diameter 100-w lamp for illumination. Made by **Lenox Instrument Co.**, 2010 Chancellor St., Philadelphia 3, Pa.

For more details circle NED-140 G7 on enclosed inquiry slip

HAND TRUCK-CART is usable as two or four-wheel unit



Readily converted from upright two-wheel to horizontal four-wheel operation, this multipurpose Trukcart speeds materials handling. For upright use, a tubular steel handle slides into the truck frame and is adjustable for any required load-lifting leverage. By inserting handle in frame at right angles to the above position, truck carries loads on four ball bearing wheels, two stationary and two swiveling. Made by **R. W. Westerfield & Co.**, Truck Dept., 228 W. Kinzie St., Chicago 10, Ill.

For more details circle NED-141 G7 on enclosed inquiry slip

WHAT DO YOU KNOW ABOUT

PORTELVATOR®

The Handy HAMILTON Portable Elevating Table

Unobstructed Perimeter (Work From ANY Side)
3 Table Surfaces
4-Point Support
4-Wheel Models
6-Wheel Models
Special Designs TOO!
Capacities to 5,000 pounds

You should know the WHOLE STORY

Write* for NEW, FREE Bulletin No. 2411

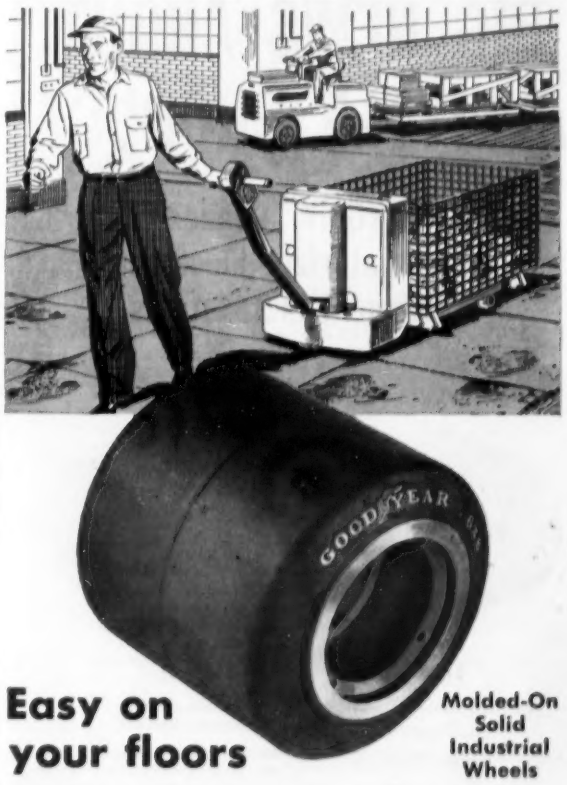
ADDRESS

THE HAMILTON TOOL COMPANY
901 Hanover Street
HAMILTON, OHIO

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

2411

For more details circle NED-142 G7 on enclosed inquiry slip



Easy on your floors

Molded-On Solid Industrial Wheels

Easy on your budget

IT'S probably no news to you that scuffed, worn-down tires can be awfully tough on floors.

That's where Goodyear Molded-On Industrial Solid Wheels come into the picture. With tread cured directly to a cast-iron wheel, tire and wheel become one unit.

Molded-On Wheels are resilient, roll easily, cushion loads and prevent floor damage. Result: reduction in load breakage and *substantial savings on floor and equipment.*

If you have an industrial tire problem, why not tell us about it? We'll be glad to make an on-the-scene investigation and suggest a solution. No obligation, of course. See your Goodyear dealer, or write Goodyear, Industrial Tire Sales, Akron 16, Ohio.

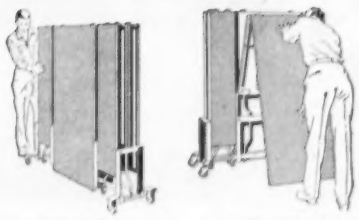
Look for this sign; there's a Goodyear dealer near you.

Use the Right Tire for the Job—Buy and Specify

GOODYEAR INDUSTRIAL TIRES

For more details circle NED-143 G7 on enclosed inquiry slip

Here's the answer to lunch period seating—Right in the department!



ROLLS OUT OF THE WAY — UNFOLDS AND FOLDS IN SECONDS

TRANSI-FOLD
FOLDING TABLES AND BENCHES

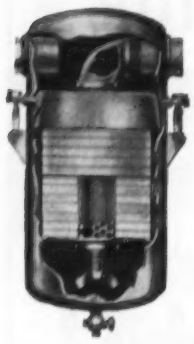
These rugged, husky, compact units are in broad industrial use and proved practical in large and small plants. They store against the wall in minimum space in the department and set up in seconds in aisleways. Because of travel time, congestion and other complications central cafeterias are being abandoned in favor of mobile or area food service but fixed tables take up too much room. They are invariably used as storage surfaces, are unsanitary and never ready for use.

These folding tables and benches enable you to provide respectable seating and gain many economies in time and space. Understructures are welded steel. Warp-proof tops are 7-ply Ph. mahogany, surfaced with high-pressure laminated washable plastic with formed steel reinforcing bars. Edges are trimmed with permanently attached stainless steel. Write for folder.

SCHIEBER SALES COMPANY • DETROIT 39, MICHIGAN

For more details circle NED-138 G7 on enclosed inquiry slip

FREE LATEST INFORMATION ON ALL STAYNEW FILTERS



Complete engineering and application data contained in the following Bulletins. Write for copies, specify Bulletin Numbers you want:

- **INTAKE FILTERS** Bulletin 100
- **PIPE LINE FILTERS** Bulletin 200
- **LIQUID FILTERS** Bulletin 300
- **AUTOMATIC FILTERS** Bulletin 500
- **DRY TYPE FILTERS** Bulletin 600
- **VISCOUS PANEL FILTERS** Bulletin 700
- **ELECTROSTATIC FILTERS** Bulletin 400

Illustrated is Model AAPHS-Absorption Filter. Protects air-operated equipment from damage caused by moisture and other foreign matter.

We also make all types of special filters . . . consult your local Dollinger representative . . . no obligation. Dollinger Corporation, 49 Centre Park, Rochester 3, N. Y.

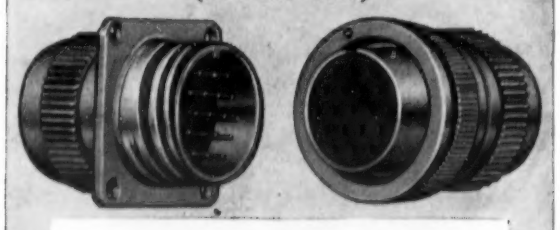
Proven Quality STAYNEW FILTERS **DOLLINGER** FILTERS FOR EVERY INDUSTRIAL NEED

For more details circle NED-148 G7 on enclosed inquiry slip

BIG NEWS ABOUT A LITTLE PRODUCT

New "PYGMY" Connectors for Miniaturized Electronic Equipment Installations

(ACTUAL SIZE)



Bendix "PYGMY" Electrical Connectors

- Gold Plated Contacts
- Closed Entry Sockets
- Resilient Scinflex Insert
- Alumilite or Cadmium Plate Finish
- Two Quick Disconnect Couplings—Double Stub Quick Action Thread or Three-Point Bayonet Lock
- Light Weight
- Small Envelope Size
- Maximum Serviceability
- Can be pressurized to current MIL-C-5015 specification
- High Strength Aluminum Shells
- Variety of Styles Available—General Duty, Environmental Resisting, Potting Types, Jam Nut Receptacles, Hermetically Sealed Receptacles
- Wide Choice of Insert Patterns (1 to 55 contacts)
- Designed especially for miniaturized Electronic Equipment

Although the newly developed "Pygmy" line of miniature electrical connectors is approximately one third smaller in size and weight than the standard Bendix* AN connector, they provide the same outstanding qualities of serviceability, ruggedness, reliability and resistance to vibration, moisture and corrosion for which all Bendix connectors have become world famous.

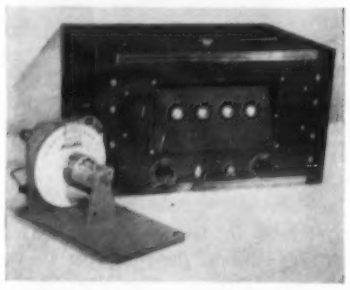
If you have an application for miniaturized electronic equipment requiring lighter and smaller connectors than standard AN types, you'll find Bendix "Pygmy" connectors the best possible solution. Write for complete detailed information. SCINTILLA DIVISION OF BENDIX AVIATION CORP., SIDNEY, N.Y.

*REG. U.S. PAT. OFF.

Scintilla Division of Bendix AVIATION CORPORATION
SIDNEY, NEW YORK

For more details circle NED-149 G7 on enclosed inquiry slip

DYNAMOMETER
tests shaded pole motors for torque and speed characteristics



Shaded pole and induction motors of all types can be tested for torque and speed characteristics by the Magtrol* dynamometer. When a decrease in speed is detected by the tachometer generator, a corresponding decrease in load torque is instantly effected and the motor stabilized in any portion of the curve.

Motors can be tested for maximum speed as low as 100 rpm. Tachometer indicates motor speed to one-half of 1 per cent or better. Speed pickup is photoelectric. Torque ranges from 1 to 750 oz-in. can be obtained. Tachometers to indicate speed up to 8000 rpm by 1-rpm increments, or 30,000 rpm by 10-rpm increments can be supplied. Made by **Magtrol, Inc.**, 3802 Highland Ave., Niagara Falls, N.Y.

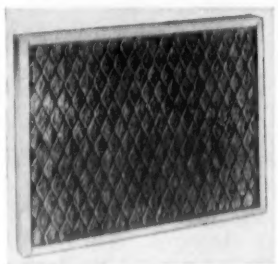
For more details circle NED-150 G7 on enclosed inquiry slip

COAXIAL CABLE CONNECTOR
50, 75 and 95-ohm sizes available

Subminiature snap-lock type coaxial cable connector and mating receptacle will withstand − 70 to 550° F, shock of 100 g on any axis and vibration of 10 to 20,000 cycles at 5 g. Available sizes are 50, 75 and 95 ohms. Plug is spring-loaded and cannot be removed by pulling on the cable or by vibration, but only by sliding its knurled sleeve. Other design configurations are available. Made by **Automation-Engineering Corp.**, Dept. SM, 723 Sonora Ave., Glendale 1, Calif.

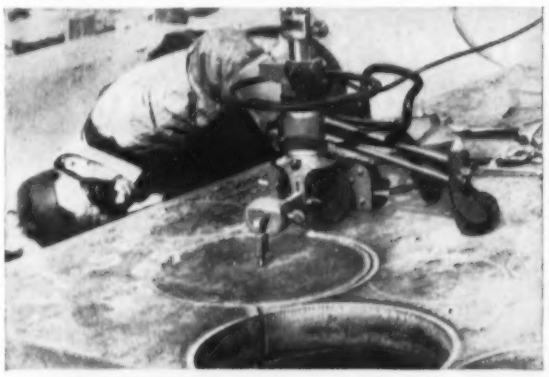
For more details circle NED-151 G7 on enclosed inquiry slip

PERMANENT AIR FILTER
in ½, 1 and 2-in. thicknesses



Aluminum-Wool media of the A-lum-O-Aire permanent dry type air filter catches and holds dust, dirt and lint particles. Filter has high retaining capacity, is fireproof and resistant to chemicals and adverse atmospheric conditions. Cleaning is by vacuum or flushing with water and replacing. Standard and special sizes are available in ½, 1 and 2-in. thicknesses. Made by **Carey Electronic Engineering Co.**, 1880 Clifton Ave., Springfield 30, O.

For more details circle NED-152 G7 on enclosed inquiry slip



CUT METAL TO ANY SHAPE

with the OXWELD CM-16 Portable Cutting Machine

Tailor-make special parts, cut bevels, circles or complex patterns—you can handle all these jobs with the fully portable (40 lb.) CM-16. And you cut costs on all these jobs because mechanized flame cutting with the CM-16 boosts production speed and output and cuts gas consumption to the bone.

The CM-16 is only one of a complete selection of OXWELD cutting machines available for all your needs. Call your nearby LINDE Office today or write for OXWELD Cutting Machine Catalog-Form 4487.

LINDE COMPANY
30 East 42nd Street
New York 17, New York

DIVISION OF UNION CARBIDE CORPORATION

"Linde" and "Oxweld" are trade-marks of UCC

For more details circle NED-153 G7 on enclosed inquiry slip

YOU CAN SAVE MONEY WITH

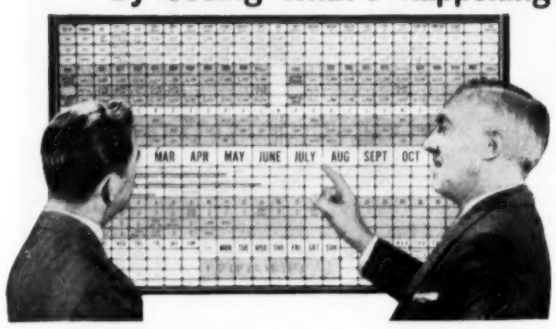
ROLLED BUSHINGS

Rolled, split bushings, bimetal or plain, are real money savers for manufacturers of many products, from business machines to bicycles. Bimetal bushings give bearing performance at bushing costs (with bronze, babbitt or sintered copper-lead on steel). Plain bushings in bronze, steel or aluminum. Wide variety of sizes. Oil holes, grooves, notches; straight, lock or special seams. Write for complete information.

FEDERAL-MOGUL DIV.
Federal-Mogul-Bower Bearings, Inc.
11079 SHOEMAKER, DETROIT 13, MICHIGAN

For more details circle NED-154 G7 on enclosed inquiry slip

You Get Things Done Better By Seeing What's Happening



BOARDMASTER VISUAL CONTROL

- ★ Gives Graphic Picture of Your Operations in Color.
- ★ Facts at a Glance—Saves Time and Prevents Errors.
- ★ A Simple, Flexible tool—Easily Adapted to Your Needs.
- ★ Easy to Use. Type or Write on Cards, Snap on Board.
- ★ Ideal for Production, Scheduling, Sales, Inventory, Etc.
- ★ Compact, Attractive. Made of Metal. Over 150,000 in Use.

Complete Price $49.50 Including Cards

FREE 24-Page ILLUSTRATED BOOKLET N-500 Without Obligation

GRAPHIC SYSTEMS, 55 West 42nd St., New York 36, N. Y.

For more details circle NED-155 G7 on enclosed inquiry slip

helpful data on uniform carbide performance

Here's what it contains:

- Tells why carbides of the same grade perform differently under identical machining conditions
- Tells what every carbide user should know about the variables that control the making of cemented carbides
- Reveals tests you can use to check carbides for quality

. . . all this and more in an eight page bulletin that originally appeared as a technical article in Carbide Engineering. Send for your copy today.

FIRLOMET

FIRTH LOACH METALS, INC.
Buttermilk Hollow Road, McKeesport, Pennsylvania
"Carbide Makers—Not Fabricators"

For more details circle NED-156 G7 on enclosed inquiry slip

Aget offers more! Over 38 standard Dustkop models to choose from . . . *Plus* engineering service to help you select, provide, and install the proper accessories and fittings to complete your dust collecting system. Write for illustrated folder . . . Today!

AGET MANUFACTURING COMPANY
1396 E. CHURCH STREET • ADRIAN, MICHIGAN

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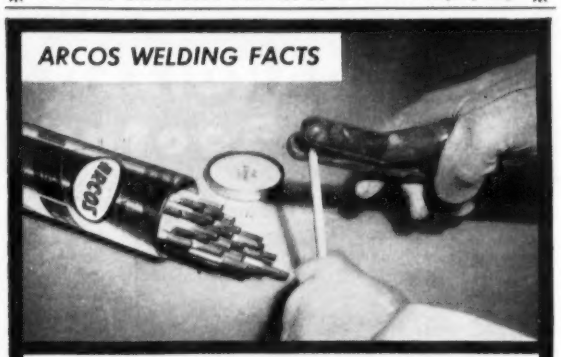
ARCOS WELDING FACTS



How to Improve Stainless Welds When Using Manual Arc

Specify Arcos for the electrode that offers the proper balance of physical, chemical and metallurgical properties for the job. Besides a wide selection, Arcos rigid quality controls in manufacture assure this balance . . . that will produce sound, uniform welds time after time.

FREE STAINLESS DATA CHART

Send today for your copy of the Arcos Stainless Electrode Application Chart.

Arcos Corporation, 1500 S. 50th St., Philadelphia 43, Pa.

ARCOS | Filler Metal Specialists

▲ For more details circle NED-158 G7 on enclosed inquiry slip ▲

MULTITON roller skids
moves machinery & heavy loads
6 TIMES FASTER

- Steers while it moves!
- Unlimited Carrying Capacity
- Self-Laying Track
- Light Weight

another time-money saver . . . THE MULTITON MOVING WAY!

Man maintains desired direction of travel by steering swivel type Multiton Roller Skid while load is moving. Saves man-hours; reduces down time. *Write for Catalog.*

STOKVIS EDERA & CO. INC. 18 Secatoag Ave., Dept. NE-7 Port Washington, N. Y.

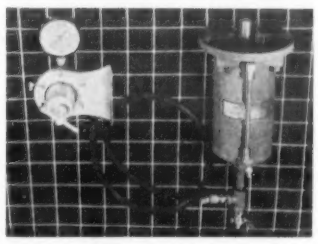
▲ For more details circle NED-159 G7 on enclosed inquiry slip ▲

SOLENOID
is miniature pull type

Operating range from −65 to 100° F adapts this miniature pull type solenoid for computing, aircraft, missile and electronic applications. It meets requirements of MIL - S - 4040. Operating voltage is 6 to 100 v dc, with plunger operating under side force of 8 to 10 g. At 0.3-amp, 110 v dc and 78° F, force is 1.3 lb with stroke of 0.03-in. Made by **Carruthers & Fernandez, Inc.**, Dept. NED, 1501 Colorado Ave., Santa Monica, Calif.

▲ For more details circle NED-160 G7 on enclosed inquiry slip ▲

PNEUMATIC DIE CUSHIONS
in six sizes from 2 to 6 in.



All-steel construction of improved model RD pneumatic die cushion adapts it to all types of inclinable presses within its capacity. It is installed by drilling and tapping only one hole, either in bolster plate or die shoe. Equipment is furnished with combination regulating valve, pressure gage and necessary fittings. It connects to shop air line, and combination pressure gage and regulating valve is fastened to any side of the press for regulating the working pressure on a given die tool. Six sizes, from 2 to 6 in., have draw ring holding pressure from 0.2 to 1 ton. Made by **Dayton Rogers Mfg. Co.**, 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

▲ For more details circle NED-161 G7 on enclosed inquiry slip ▲

HIGH PRESSURE UNION
forged of steel for severe service

Suited for severe gas, hot oil, water, steam and hot or cold ammonia service, the Petro 6000-lb CWP forged steel union is rated for 1500-psi steam working pressure at 900° F. Threaded and socket weld types, available in nine sizes, have considerably thicker wall thicknesses than the conventional 3000-lb CWP union. For instance, hub end diameter of 1¼-in. size has been increased from 2.040 in. to 2.310 in. (see photo). Both nuts and ends are octagon shaped. Nut threads are rust-proof, sparkproof and permanently lubricated with cadmium. Made by **Clayton Mark & Co.**, Dept. PR-1, 1900 Dempster St., Evanston, Ill.

▲ For more details circle NED-162 G7 on enclosed inquiry slip ▲

SEAL RING PROBLEMS SOLVED!

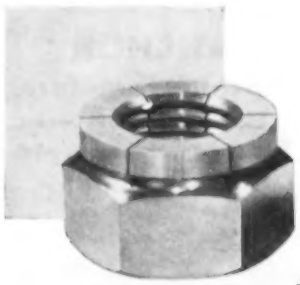
Molded from carbon-graphite materials, Stackpole mechanical seal rings (and mating members) are specifically "tailored" to exactly the right mix for your equipment and its operating conditions. Send details of your application for recommendation by Stackpole engineers.

STACKPOLE CARBON CO.
St. Marys, Pa.

STACKPOLE

"EVERYTHING IN CARBON BUT DIAMONDS"

▲ For more details circle NED-163 G7 on enclosed inquiry slip ▲



specify standard FLEXLOC®

SELF-LOCKING NUTS

FLEXLOC DESIGN FEATURES
- one-piece, all-metal construction
- resilient locking section
- controlled locking torques
- lock and stop nut in one
- every thread carries its full share of load

DO YOU KNOW? Standard FLEXLOCS improve the finish of rough bolts. They smooth off rough threads. And the locking threads on all-metal FLEXLOCS are not chewed up when used on rough bolts. FLEXLOCS are stocked by authorized industrial distributors in a full range of sizes from #0 to 2". Write for Bulletin 866. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.
FLEXLOC LOCKNUT DIVISION SPS JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-164 G7 on enclosed inquiry slip ▲

Announcing . . . AMERICA'S MOST MODERN—MOST EFFICIENT

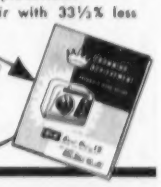
Automatic Hand and Hair Dryer
Sani-Dri No. 12

Never Before So Many Exclusive Features

Decorator Styling!—Blends perfectly with today's new fixtures . . . modernizes old washrooms.
Faster Drying!—Increased air flow . . . gives much greater drying efficiency.
Quieter . . . Safer!—Dynamically balanced motor and blower operate smoother and quieter.
Less Maintenance Required!—New timer gives longer service . . . thermostatic motor protection eliminates fuse replacement.
More Economical, Too!—Delivers more warm air with 33⅓% less current consumption.

GUARANTEED 2 FULL YEARS

Write Today For New Brochure . . . SHOWS THE COMPLETE LINE



"Dependable Since 1897"
THE CHICAGO HARDWARE FOUNDRY COMPANY
1967 Commonwealth Ave., North Chicago, Ill.

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BOSTITCH HOG RING STAPLER

- feeds 50 rings per load
- brings new speed and savings to many ring fastening jobs

Ask for descriptive flier

Look up "Bostitch" in U. S. or Canadian phone book or write 687 Briggs Drive East Greenwich, R. I.

Fasten it better and faster with
BOSTITCH® STAPLERS AND STAPLES

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ANCHOR
Machines, Motors, Rails, Partitions, Flanges, Seats, etc. IN CONCRETE PERMANENTLY

USE ROCK-TRED
ANKOR SET

- Easy To Apply
- Sets in ½ Hour
- Non-Shrinking
- Self-Bonding
- Contains No Pitch, Asphalt or Resin

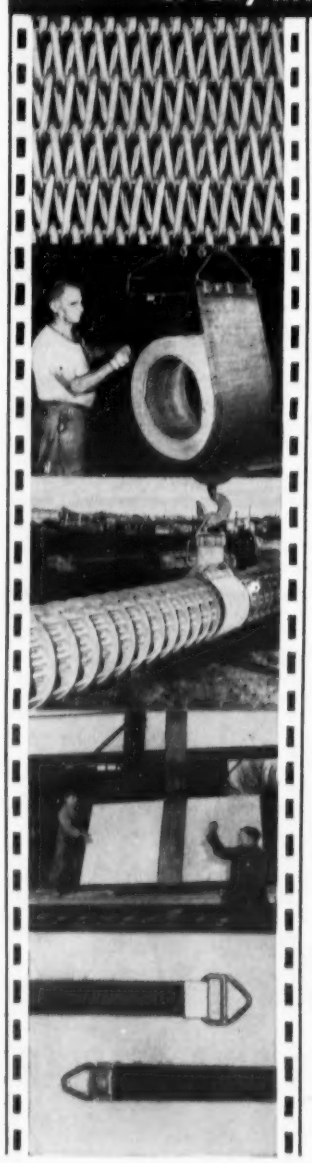
Also for fast-patching cracks and holes in concrete

Comes packaged ready to use. Simply add water and apply. Quickly forms an extremely hard durable bond that becomes an integral part of the floor. Blends with surrounding concrete. Send for details.

ROCK-TRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
7440-7450 North St. Louis Avenue • Skokie, Illinois

For more details circle NED-167 G7 on enclosed inquiry slip

GRIPPER SLINGS
Star Performer
for any lifting job



Made of WOVEN WIRE with unique, spiral loop construction that gives maximum flexibility and strength with minimum chance of load damage.

Broad, flat bearing surface gives greater load stability. All metal construction resists wear and corrosion.

Used in BASKET HITCH for maximum strength or CHOKE HITCH for maximum gripping power.

For lifting light or heavy loads. Conforms to any size or shape.

AVAILABLE in standard lengths, widths and PRETESTED capacities up to 100,000 lbs. —special sizes on request. See your materials handling or mill supply distributor for a demonstration. OR, write direct for free catalog and name of nearest distributor.

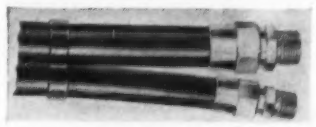
The Cambridge Wire Cloth Co.
Dept. AG • Cambridge 7, Md.

WIRE CLOTH | WOVEN WIRE CONVEYOR BELTS | WIRE CLOTH FABRICATIONS

OFFICES IN PRINCIPAL INDUSTRIAL CITIES
DEALERS: ask about open territory data

For more details circle NED-168 G7 on enclosed inquiry slip

DUAL HOSE ASSEMBLY
in lengths up to 150 ft



This dual hose assembly, consisting of two separate LP gas hoses joined by neoprene-covered aluminum clips, is for service-truck delivery of Butane or Propane in liquid state, with simultaneous vapor return. Lengths up to 150 ft are carried on electrically or manually operated reels. Standard 2-rayon braid hoses with two stranded static wires are used and are equipped with either pressed-on or reusable couplings. Assemblies are offered in ½ x ¾, ¾ x 1 and 1 x ½-in. inside hose diameters. Hose has 350-psi working pressure and 1750-psi minimum burst pressure. Style LP-51 hose is also obtainable for working pressure to 250 psi, with 1250-psi burst pressure. Made by **Anchor Coupling Co.**, Dept. ND, E. Church & Fourth Sts., Libertyville, Ill.

For more details circle NED-169 G7 on enclosed inquiry slip

DANGER SIGNAL PLUG
shows openings in pipe lines

Brilliant red bands of free - hanging Swagelok danger signal bull plugs are easily seen to indicate locations of dangerous openings in pipe lines. Each has a permanently attached chain and ring for fastening to valve or pipe, preventing loss. It can also be spot welded to the line. Plug provides a safe and convenient method of gaining access to a threaded port of piping or a valve. It has a long hex shank and a long thread. Steel and stainless steel types in ¼ to 2-in. pipe sizes are available. Made by **Crawford Fitting Co.**, 886 E. 140th St., Cleveland 10, O.

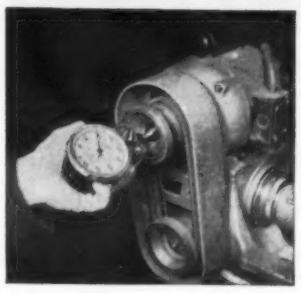
For more details circle NED-170 G7 on enclosed inquiry slip

SAFETY GLASSES
have rigid plastic frames

Rigid plastic frames which retain their original shape without bowing are used in these safety glasses. Nose pads are broad-bearing for comfortable distribution of weight. The two colors offered are opaque slate (bluish gray) to eliminate light reflection and translucent flesh. Models 375, 376 and 377 are respectively sized at 44 x 37 mm, 46 x 39 mm and 48 x 41 mm. Made by **Chicago Eye Shield Co.**, 2335 W. Warren Blvd., Chicago 12, Ill.

For more details circle NED-171 G7 on enclosed inquiry slip

ALL-PURPOSE JONES HAND TACHOMETERS
for quick, easy, instantaneous readings over full 360 degrees of the dial



The Jones portable hand tachometer has many uses in industry. They are light, easy to carry and require no electrical connections. The scale readings are over the full 360° of the dial and are uniformly spaced for easy reading at a glance.

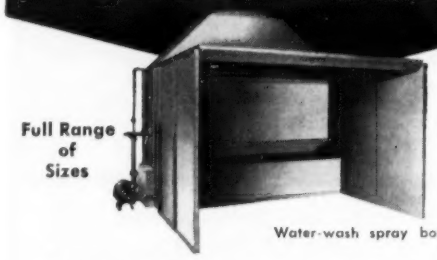
Does not require any special skill — Easy to use even by an unskilled person, the Jones portable hand tachometer features a range selector which is a small knurled knob plainly marked for easy and rapid range change.

Handy, accurate instrument for ready use and trouble shooting—Operators, trouble shooters and inspectors find the Jones portable hand tachometer a great assist as they do their work in automotive service stations, power plants, electric generating stations, oil refineries and many other places where a handy, accurate instrument is desirable. **Write for Bulletin 146-1 or demonstration to:**

JONES MOTROLA CORPORATION
STAMFORD, CONNECTICUT

For more details circle NED-173 G7 on enclosed inquiry slip

STANDARDIZED Spray Booths



DeVilbiss Standardized Spray Booths — water wash, dry type, bench or leg type in a complete range of sizes — are built of standard, fireproof, reinforced steel panels. They cost less, are easier to erect . . . easier to convert to future needs and give better service.

DeVilbiss Booths are built to the standards of the National Board of Fire Underwriters. They provide a balanced, scientific exhaust, are easy to keep clean, cost less to operate. Write for data.

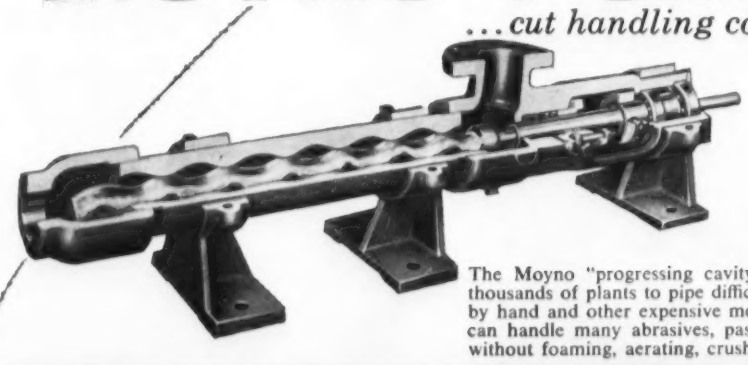
DEVILBISS
THE DEVILBISS COMPANY
Toledo, Ohio
San Jose, Calif. • Barrie, Ontario • London, England

For more details circle NED-174 G7 on enclosed inquiry slip

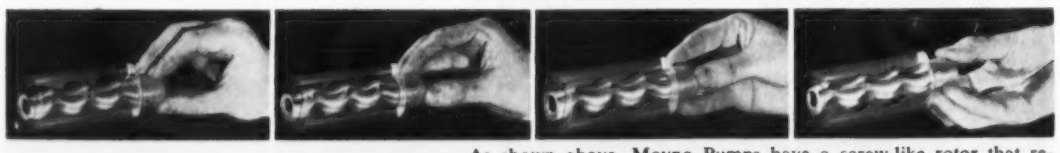
from abrasive slurries to delicate foods

MOYNO® PUMPS

...cut handling costs



The Moyno "progressing cavity" pumping principle has enabled thousands of plants to pipe difficult materials that were transported by hand and other expensive means. Moyno is the only pump that can handle many abrasives, pastes, slurries, chemicals, foods, etc. without foaming, aerating, crushing or excessive pump wear.

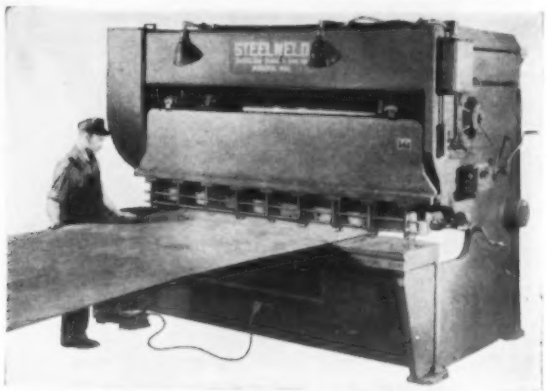


As shown above, Moyno Pumps have a screw-like rotor that revolves in a double threaded stator creating progressing cavities which smoothly move material through the pump. They will pump anything that will move through a pipe . . . even plaster and non-pourable pastes! Moyno Pumps are available in capacities up to 500 gpm and pressures up to 1000 psi.

Examine your processing methods. No doubt there are several places where Moyno Pumps can drastically cut costs. Ask us, we'll give you a frank answer. Send us an outline of your problem today! Write for Bulletin 30-NE.

ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO — BRANTFORD, ONTARIO

For more details circle NED-172 G7 on enclosed inquiry slip



ALL STEELWELD SHEARS *Controlled Electrically!*

Convenient electric foot-switch operation is standard for all Steelweld *Pivoted-Blade* Shears. The switch can be slid around floor to wherever handiest. It eliminates tiresome leg lifting required for usual mechanical foot treadle.

Steelweld Shears are built in all sizes for plate to 1-1/4" thick. Get the facts on these truly modern machines.

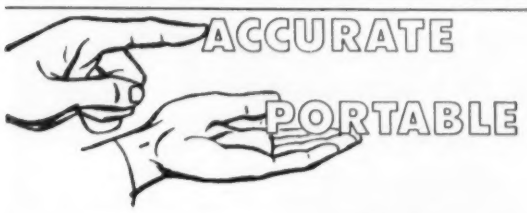
STEELWELD Pivoted-Blade SHEARS CATALOG No 2011

Send for free Catalog No. 2011

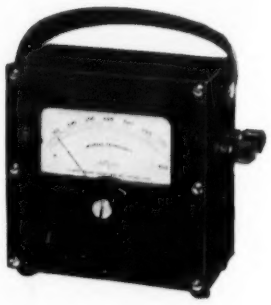
THE CLEVELAND CRANE & ENGINEERING CO.
6609 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

For more details circle NED-175 G7 on enclosed inquiry slip



Alnor® PYROMETER TYPE 1500



Checking temperatures of electric heating mantles is but one of the many laboratory temperature jobs performed with consistent accuracy within ¾ of 1% full scale—under all conditions.

Sturdy case protects precision meter movement in portable use. Direct reading scale face can be quickly read at distance—no slide wires or conversion tables needed. Available in ten scale ranges from 0-400° to 0-3000° F. or centigrade equivalents.

Get full details on the Type 1500 in Bulletin 4434. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-176 G7 on enclosed inquiry slip

One Source Service

for OIL SEALS RUBBER PARTS LEATHER BELTING and PACKINGS

Extensive manufacturing and research facilities, plus over 66 years of experience, are behind every CHICAGO-ALLIS product or service.

When you buy shaft or face seals, molded rubber parts, packings, mechanical leathers, or power transmission belting, specify CHICAGO-ALLIS. Three divisions to serve you—call the CHICAGO-ALLIS rep. in your area.

Write today for this fully illustrated FREE catalog on all CHICAGO-ALLIS products and services.

Chicago-Allis Engineers to Your Specifications

CHICAGO-ALLIS MFG. CORP.

Producers of CHICAGO BELTING · ALLIS RUBBER · ALLIS SEAL Products

130 NORTH GREEN STREET • CHICAGO 7, ILL.

For more details circle NED-177 G7 on enclosed inquiry slip

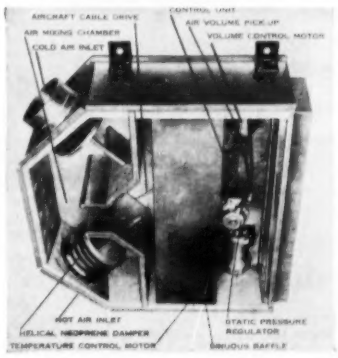
INDUSTRIAL VACUUM CLEANER glass fiber container resists corrosion and is strong and durable

Adaptable for wet or dry pick-up as well as for blowing, model BP-2 vacuum cleaner has ample power and capacity for most industrial applications. Gracefully contoured container is made of Superlite molded glass fiber material which is light in weight, practically indestructible and withstands action of corrosive liquids in wet pick-up and transfer operations. Color is integral with material.

Handle facilitates transporting unit, even up and down stairs. Other features are easy-rolling wheels and casters, pushbutton hose connection lock, nonclogging self-cleaning internal filter and balanced construction for stability. Machine is available, as illustrated, with two large fixed rear wheels and two front ball bearing casters for easy maneuverability, or with four conventional casters and without transport handle. Made by **National Super Service Co.**, 1949 N. Twelfth St., Toledo 2, O.

For more details circle NED-178 G7 on enclosed inquiry slip

AIR CONDITIONING CONTROL reduces air pressure and velocity



Hot and cold air entering the Kno-Draft series 45 air attenuator are mixed in it prior to discharge at a lower pressure and velocity. A thermostatically controlled motor proportions both hot and cold air flow and a second motor, actuated by a pressure regulator, maintains constant volume regardless of air pressure fluctuations at the inlets. Air volume of each valve can be prebalanced at the factory, or adjusted during or after installation. Shallow cabinet contains helical neoprene dampers with minimum leakage, aircraft cable drive over nylon pulleys and sinuous baffle and lining to absorb sound. Attenuator is made in six sizes with 140 to 1200 cfm ratings for either vertical (down) or horizontal discharge. Made by **Connor Engineering Corp.**, 114 Shelter Rock Lane, Danbury, Conn.

For more details circle NED-179 G7 on enclosed inquiry slip

Ellisco SEAMLESS CANS

For . . . STORING · SHIPPING HANDLING SAMPLES SPECIAL PARTS PACKAGING AND MANY OTHER INDUSTRIAL USES

Industries everywhere use ELLISCO Seamless cans for many different applications. They will meet your specific needs, too, because they are *light in weight, unbreakable, available in a wide variety of types and sizes.*

Capacities: from ¼ oz. to 16 oz.

Types and Sizes: flat, from 1⅝" x ¼" to 5½" x 1¼" deep, from 1⅝" x ⅝" to 4" x 2⅜"

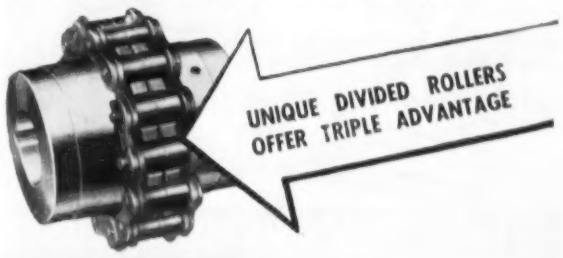
Most standard sizes are carried in stock. Special cans, and standard sizes trimmed to lower heights, made to order. Some styles have LabelStik covers for identifying contents.

Write, wire or call for more information and Bulletin 116.

GEORGE D. ELLIS & SONS, INC.
4036 N. American St., Dept. A, Phila. 40, Pa.

For more details circle NED-180 G7 on enclosed inquiry slip

For reliable shaft connections . . .



LINK-BELT "RC" flexible couplings

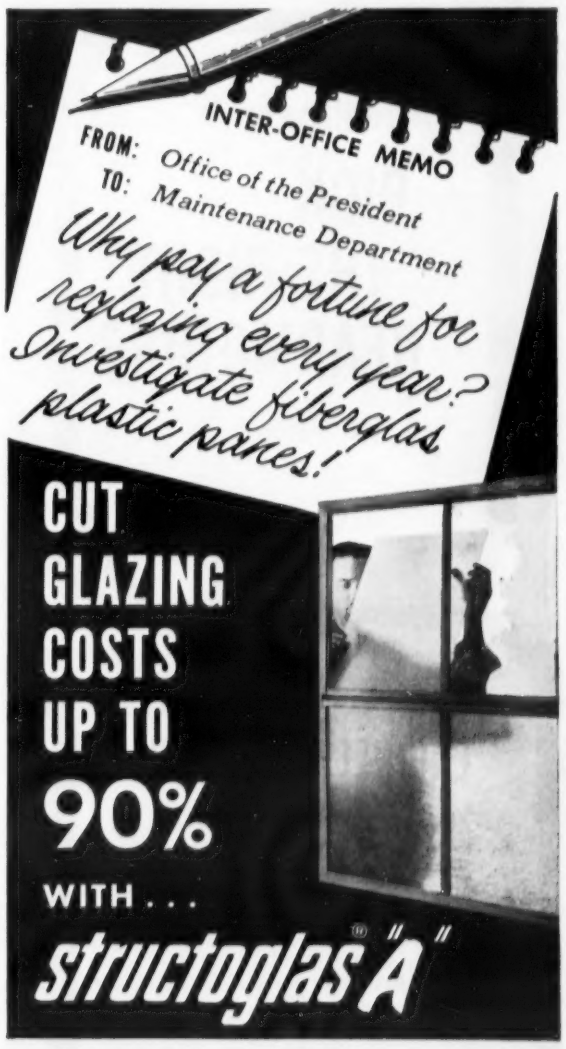
Simplicity . . . low cost . . . dependability—Link-Belt "RC" flexible couplings offer these important design and performance benefits. Unique divided roller assures equalized load . . . proper balance at high speed . . . effective compensation for shaft misalignment. These all-steel couplings are precision-made and hardened for long life. They're stocked in a wide range of sizes, and are available for shafts up to 12 inches.

Write to LINK-BELT COMPANY, Dept. N.E.D., Prudential Plaza, Chicago 1, Ill., for Folder 2363.

14,488

LINK BELT
"RC" FLEXIBLE COUPLING

For more details circle NED-181 G7 on enclosed inquiry slip



First costs are usually **last costs** when you specify tough STRUCTOGLAS "A" fiberglas-reinforced panes that reduce normal window breakage by 90% or more. Here is a product which, through advanced chemistry, remains maintenance-free years longer than other "look-alike" products.

Frequent and costly window replacement is cut to an absolute minimum because STRUCTOGLAS "A" is both shatterproof and weatherproof . . . **stops** breakage caused by vibration, twisting, vandalism, and other common causes.

For replacement of **continuous top-hung sash**, or **ordinary factory sash**, STRUCTOGLAS "A" **panels** provide tremendous savings in materials, labor and future maintenance costs.

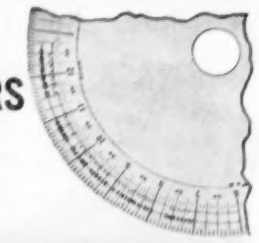
STRUCTOGLAS "A" is available in standard glazing sizes for fast, easy installation in the following gauges: Standard $\frac{1}{16}$", Special .080" and Heavy Duty $\frac{1}{32}$". Colors: Softlite Green, Skyline Blue and Crystal (clear translucent).

structoglas®
division of **international** molded plastics, inc.
4307 west 35th street • cleveland 9, ohio

WRITE FOR BULLETIN SL-1 FOR COMPLETE DETAILS

For more details circle NED-182 G7 on enclosed inquiry slip

How SERVIS RECORDERS CUT MATERIALS HANDLING COST



Servis Recorders help you cut needless expense in materials handling by charting actual motor running time so that both too much and too little maintenance can be prevented.

Servis Recorder Charts will tell you exactly how busy and idle your equipment is. Also number of lifts per day are recorded.

By using small, compact, fool-proof Servis Recorders, you can improve your scheduling and provide needed materials at the right spot and at the right time.

For full details on Servis Recorders send for this booklet, "Control Over Lift Trucks."

THE SERVICE RECORDER CO.
1013A Rockwell Ave. • Cleveland 14, Ohio

For more details circle NED-183 G7 on enclosed inquiry slip

will you

PICK THE RIGHT GEARMOTOR?

Be sure the easy way ask for the

NEW WESTINGHOUSE ENGINEERING MANUAL

All under one cover you'll find complete facts, arranged for quick selection, of Westinghouse Life-Line® "A" gearmotors in ratings up to 75 hp. . . . single, double or triple reduction. Covers: motor types—frame sizes—peak loads—overhung load capacities—construction and installation features. Delivery on any unit through your local Westinghouse Sales Office.

J-07861

YOU CAN BE SURE...IF IT'S
Westinghouse

YOUR FREE COPY

of manual B-6397-A is waiting. Write Westinghouse Electric Corporation, 3 Gateway Center, P. O. Box 868, Pittsburgh 30, Pa.

For more details circle NED-184 G7 on enclosed inquiry slip

FLOOR SWEEPERS now offered with butane engines

Single cylinder, four-cycle butane-burning engines are optionally available on company's indoor-outdoor sweepers. Wide range of models include the No. 27, 36 and 48 Industrial Specials which cover 33,750 to 60,000 sq ft per hour, to the MHD-36 and MHD-48 power sweepers which cover from 80,000 to 100,000 sq ft per hour. Units will pick up the finest dust particles, as well as heavier debris such as paper cups, small cartons, cans, metal scrap and leaves. Dust control apparatus prevents debris from clogging the sweeper and hampering its efficiency. Made by **Modern Power Sweeper Co.**, 736-8 N. McKeever Ave., Azusa, Calif.

For more details circle NED-185 G7 on enclosed inquiry slip

INDICATING LIGHT UNIT checks burned out panel light bulbs

Quick test of burned out lamp bulbs on control panels and pushbutton stations can be made with this push-to-test indicating light unit. Through use of continuously energized testing circuit, immediate indication of a faulty bulb is given by pressing unit's color cap. It is not necessary to remove light cap or the bulb. Easily fitted in the same hole and mounting space as existing oil-tight units, this device can be panel or back-mounted. Cap is faceted for wide-angle visibility and is offered in red, green, amber, white, blue and clear. Device uses the G-E No. 12 vibration-resistant 6-v bulb and meets revised JIC standards. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

For more details circle NED-186 G7 on enclosed inquiry slip

Hose Ends & Assemblies

Weatherhead Co.—40-page catalog on "Hose Ends and Assemblies" provides details on bulk industrial hose, permanently attached hose assemblies, swaged hose assemblies and ends, hose end swivel adapters as well as assembly instructions and installation data. Agent selector chart shows over 180 elements. Resistance ratings of Butyl, Buna-N, neoprene, Teflon and other compounds are identified with specific Weatherhead hoses.

For more details circle NED-187 G7 on enclosed inquiry slip

SCHERR PRECISION MEASURING TOOLS

NON-ROTATING SPINDLE BLADE TYPE MICROMETER HEAD

TUMICO — to be built into fixtures, machine tools, delicate instruments and cross-slides.

NON-ROTATING SPINDLE BLADE TYPE MICROMETERS

For Measuring of narrow depth grooves, slots, keyways, splines, square threads, recesses and similar hard-to-measure surfaces.
BLADE THICKNESS .030" GAGING DEPTHS TO 1/4"
Available Carbide-tipped
Spindle and Anvil Blades are hardened, ground and lapped to contact fit
TUMICO
Graduated in .001"
Ranges: 0-1", 1-2", 1½-2½", 2½-3½" 3½-4½" and others

Mandrel Type MICROMETER Sets
with TUBULAR Frame for • EXTRA STRENGTH • LIGHT WEIGHT

Each Set has a range of 6" and is equipped with setting Standards & mandrels in finished wooden case
Available from 6" to 96"
Light Weight Frames For Extra Large Sizes
TUMICO

NEW MICRO PROJECTOR $375.00 BASE PRICE

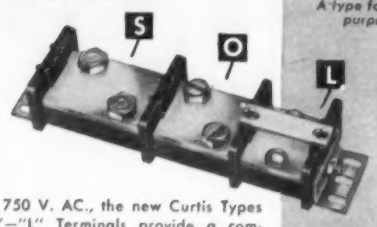
Sold thru Tool Supply Houses WRITE FOR ILLUSTRATED FOLDER

GEO. SCHERR CO., INC.
200 ND LAFAYETTE ST. • NEW YORK 12, N. Y.

For more details circle NED-188 G7 on enclosed inquiry slip

NEW CURTIS Types "S"—"O"—"L" Terminal Blocks — Up to 225 Amps.

Curtis Terminal Blocks Make Better Connections — Economically — Quickly. A type for every purpose.



Rated at 750 V. AC., the new Curtis Types "S"—"O"—"L" Terminals provide a compact, safe, orderly termination for incoming power leads. Type "L" is designed for No. 1 wire, Type "O" for 1/0 and Type "S" for 4/0.

They can be combined with Curtis Types "H", "BT" and "BS" Terminals to provide power and control terminals on the same, space conserving block.

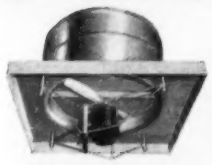
The terminal bars are brass and screws are set in "blind" holes to eliminate possibilities of shorting. Type "L" is furnished with a white fibre marking strip for identification.

Write for Bulletin No. 2. Also ask about wide selection of other blocks available.

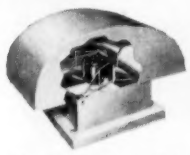
CURTIS DEVELOPMENT & MFG. CO.
3206 North 33rd Street, Milwaukee 16, Wisconsin

For more details circle NED-189 G7 on enclosed inquiry slip

Design Simplicity of Hartzell Roof Ventilators Means . . .



Hartzell Vertijet Roof Ventilator



Hartzell Reversible Roof Ventilator (moves air in either direction)

. . . High Efficiency

Hartzell roof ventilators expel large volumes of heat, smoke or fumes quickly and efficiently because simplified design reduces obstructions to air flow.

. . . Low Initial Cost

The elimination of complications in design and construction produces savings in production costs which are passed along to you.

. . . Minimum Maintenance

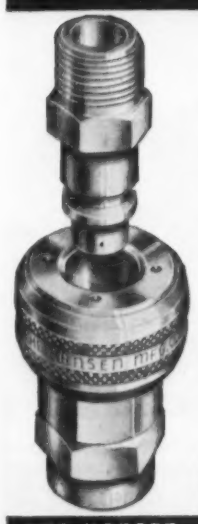
By minimizing the number of moving parts, Hartzell reduces the number of things which will demand attention. Under normal operating conditions, periodic motor lubrication should be the only maintenance required.

Bulletin A-112A contains complete specifications and performance data on the models shown as well as on several other Hartzell roof ventilators. Ask your Hartzell field engineer or write for your free copy . . . do it today.

HARTZELL PROPELLER FAN CO.
Div. of Castle Hills Corp.
606 Thomas Blvd., Piqua, Ohio
ENGINEERING OFFICES IN PRINCIPAL CITIES

For more details circle NED-190 G7 on enclosed inquiry slip

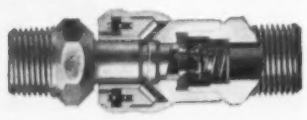
HANSEN QUICK-CONNECTIVE PUSH-TITE COUPLING



Provides Instant Automatic Flow or Shut-Off

To connect a Hansen Push-Tite Coupling, you merely push the Plug into the Socket with one hand. Flow is instantaneous.

To disconnect, push back sleeve on Socket . . . Coupling disconnects and flow is shut off instantly and automatically. No tools required. When Coupling is connected, Plug is free-swiveling, thus eliminating any possibility of kinks in hose.



Two-way shut-off and straight-through Couplings also available.
WRITE FOR CATALOG

THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

For more details circle NED-191 G7 on enclosed inquiry slip

LANDAHL

Puts 450 Shipping Cases Per Hour Within Easy Reach

Landahl Chainless Conveyors solve costly problems at Daniel W. Mikesell, Inc., large potato chip manufacturer. These endless overhead conveyors keep shipping cartons flowing smoothly with:

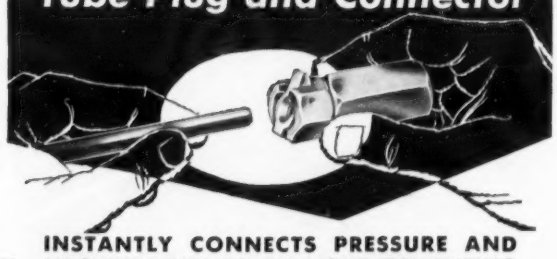
- Minimum of motion
- No crossing of aisles overhead
- Minimum of manual handling
- No costly stacking

On only one hundred eighty feet of Landahl Chainless Conveyor traveling 900 feet per hour with 90 hangers on 2′ centers, 450 shipping cartons per hour are always within easy reach of packagers. Write today for Bulletin LS-1.

THE LANDAHL CONVEYOR CO.
13116 ATHENS AVENUE CLEVELAND 7, OHIO
A SUBSIDIARY OF THE AMERICAN MONORAIL COMPANY

For more details circle **NED-192 G7** on enclosed inquiry slip

New "Push On-Pull Off" Tube Plug and Connector



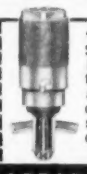
INSTANTLY CONNECTS PRESSURE AND VACUUM LINES TO STRAIGHT END TUBING

for AIR, WATER, STEAM, FREON, ETC.

Simply push the Connector over end of tubing and press to "stop" position. This **AUTOMATICALLY** locks tubing into place for a leak-proof seal. To unlock, press button and pull Connector off. For any pressure to 1000 psi; vacuum up to 25 microns. Rugged, simple, fool-proof, it saves time and labor. One end tapped for inlet connection. Stock sizes for 1/4" to 1" OD tubing. Other sizes to order. Write for Calalog and prices.

"Quick-Seal" Self Sealing Test Plug. Uses test pressure to insure leak-proof seal. Capacities to 500 psi.

Expanding Seal Test Plugs and Filling Connectors.



"Quick-Seal" Self Sealing Filling Connector — adapts and seals air or liquid pressure lines to openings.

MECHANICAL PRODUCTS CORPORATION
176 North Ogden Avenue • Chicago 7, Illinois

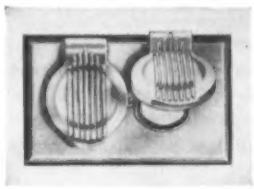
For more details circle **NED-193 G7** on enclosed inquiry slip

VIBRATION ABSORBING MOUNTS for heavy electronic equipment

Load capacities above 60 lb and temperature resistance from −80 to 250° F are afforded by series of Temproof heavy-duty vibration isolation mountings for heavy electronic equipment. Compact mountings meet MIL-C-172B specifications and are self-damping in their resonant ranges. Units support loads in either upward or downward direction. Made by **Lord Mfg. Co.**, Dept. F, 1635 W. Twelfth St., Erie, Pa.

For more details circle **NED-195 G7** on enclosed inquiry slip

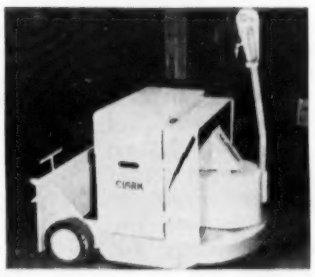
OUTDOOR ELECTRIC OUTLETS four sealed weatherproof units



Spring - hinged individual covers over each outlet, non-corroding parts and tightly sealed construction to protect against weather and moisture are features of Flip-Tite line of outdoor electric outlets. No. 412 universal plate unit with "flip" covers will fit any standard duplex receptacle. No. 415 universal is similar, but for single receptacles and switches. Two weatherproof grounding duplex receptacles are No. 413 with parallel slots and 15-amp, 125-v rating, and No. 414 with tandem slots and 15-amp, 250-v rating. Latter two types are three-wire units with U-shaped ground and UL and CSA listings. Made by **Royal Electric Corp.**, 97 Grand Ave., Pawtucket, R. I.

For more details circle **NED-196 G7** on enclosed inquiry slip

BATTERY-POWERED TRACTOR has draw bar pull of 200 lb



Both pulling and pushing operations in confined areas can be done with the Powrworker battery-powered tractor with normal draw bar pull of 200 lb. Breakaway rating is 700 lb. Unit has two speeds forward and reverse and will travel 2 mph fully loaded, 3.2 mph empty. Model PT-S, for single row battery, is 39¼ in. long less coupler, while model PT-D, for double row battery, is 44⅝ in. long. Overall width of both models is 32 in. A 12-v system powers the high torque series wound motor which transmits power to drive wheel axle through 22:1 double reduction spur gears. Made by **Clark Equipment Co.**, 1952 Arze St., Battle Creek, Mich.

For more details circle **NED-197 G7** on enclosed inquiry slip

NEW SPEED REDUCER Reference Bulletin

Specifications on almost 5,000 standard stock Cone-Drive speed reducers, including shaft mounted and fan or water-cooled models. Capacities from fractional to 665 hp. Center distances from 2" to 18".

24 pages illustrated with assembly drawings, mechanical and thermal hp ratings, output torque and chain-pull ratings plus other useful facts.

Write for free Bulletin CD-218 today!

CONE-DRIVE GEARS
Division, Michigan Tool Company
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
7171 E. McNICHOLS ROAD • DETROIT 12, MICHIGAN

For more details circle **NED-198 G7** on enclosed inquiry slip

B.F.Goodrich

FREE TIRE AND WHEEL ANALYSIS can increase efficiency, cut costs

New All-Purpose pneumatic industrial tire features versatility! The tread provides excellent traction on all surfaces, in forward or reverse. Huskier shoulders and a continuous center rib help assure longer, more even wear. The tire body is stronger, more stable under heavy or awkward loads. And because it's pneumatic, floors are protected. The ride is cushioned to reduce driver fatigue and protect loads.

Get a FREE TW ANALYSIS!

The proper tires on materials handling equipment can mean big savings. The right tires can increase the efficiency of the vehicle. They wear longer. Often they help reduce maintenance expense. Make sure you have the right tires on your equipment. Request a free analysis of your materials handling problem. Just mail the coupon. A special consulting service also is available to manufacturers of materials handling equipment.

B.F.Goodrich Tire Co.,
A Division of The B.F.Goodrich Co.
Department TW-648, Akron 18, Ohio

Please send me additional information on your Tire and Wheel Analysis Plan

Name_____
Company_____
Street_____
City_____ Zone____ State____

B.F.Goodrich

Specify B.F.Goodrich tires when ordering new equipment

For more details circle **NED-199 G7** on enclosed inquiry slip

WITH AN FMC AUTOMATIC HARDWOOD PALLET NAILING MACHINE

Mr. W. C. Maness says, "I CAN MAKE A BETTER PALLET, AT LESS COST AND FAR MORE RAPIDLY THAN UNDER THE HAND NAILING PROCESS WE FORMERLY USED."

An FMC Automatic Hardwood pallet Nailer like this one in operation at Maness Mfg. Co., Bryson City, N. C. will lower your accident rate, will drive screw type nails, raise your product quality.

Follow the lead of the Maness Manufacturing Company and put the FMC 401000 nailer to work for you today and get these same benefits in *your* plant. In addition to the direct savings outlined above, you'll find an FMC nailer will:

Reduce splitting
Nail wet or dry hardwood
Produce your orders on time
Increase your production
Countersink nails

Yes, for profit, substitute the automation of an FMC Nailer for out-of-date hand nailing. As Mr. Maness says, "We've had no mechanical failures." That means you, too, can build your nailing operation around the dependable FMC hardwood nailer.

Write today for complete details.

FOOD MACHINERY AND CHEMICAL CORPORATION
NAILING MACHINE SECTION
RIVERSIDE, CALIFORNIA

Food Machinery and Chemical Corporation; Nailing Machine Section, Riverside, Calif.
Please send information on Nailing Machine Checked
☐ *Pallet Maker* ☐ *General Purpose Nailer*
NAME_____ COMPANY_____
ADDRESS_____
CITY_____ STATE_____

For more details circle **NED-194 G7** on enclosed inquiry slip

NO EQUAL THE WORLD OVER!

the HANSEN line of Automatic Tackers—

SAVE TIME AND STEPS in tacking—

- Upholstery
- Shelving
- Screens
- Posters
- Rugs
- Material
- Labels
- Insulation
- Decorations

. . . a versatile tool with 1001 uses!

HANSEN High Speed Automatic Tackers are recognized the world over for their superiority in design . . . lightweight, sturdy construction . . . and dependable, trouble-free service.

36 models with 80 staple sizes make HANSEN the most advanced and complete line. Select the type especially designed for your specific need.

Write for booklet

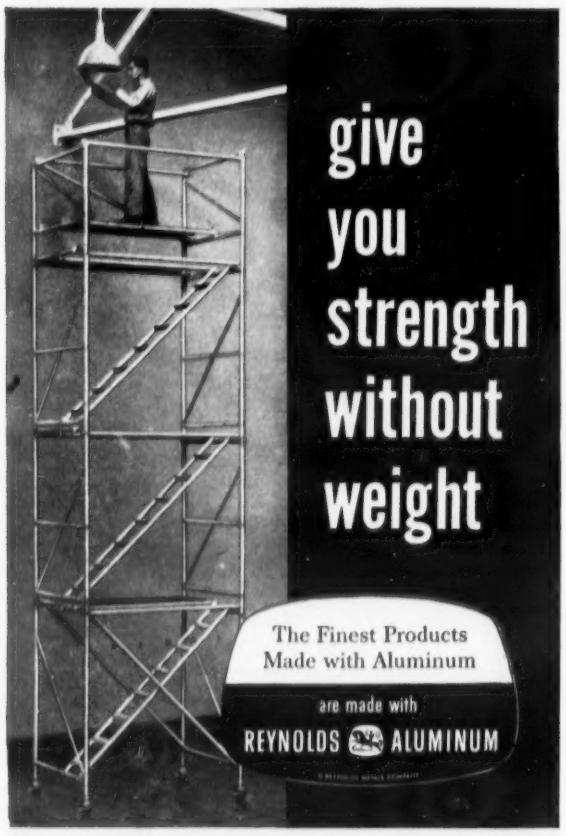
BE SURE IT'S A HANSEN ORIGINAL

A. L. HANSEN mfg. co. 5164 RAVENSWOOD AVE. CHICAGO 40, ILLINOIS

T5571

For more details circle NED-200 G7 on enclosed inquiry slip

ALUMINUM SCAFFOLDS



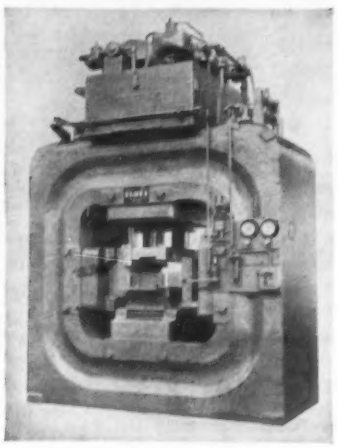
Aluminum weighs only one third as much as steel. Think what this means when moving, erecting or taking scaffolds down. Aluminum scaffolds won't rust; this eliminates rusty joints and rusted fittings; means easier, quicker handling and maintenance-free long life.

Many scaffold manufacturers make aluminum scaffolds in a variety of types and sizes. For the names of those who use strong, lightweight, rustproof Reynolds Aluminum, write direct *Reynolds Metals Company, P.O. Box 1800-NO, Louisville 1, Kentucky.*

See "CIRCUS BOY," Reynolds exciting dramatic series, Sundays on NBC-TV

For more details circle NED-201 G7 on enclosed inquiry slip

POWDERED METAL PRESS has 1000 and 750-ton capacity rams

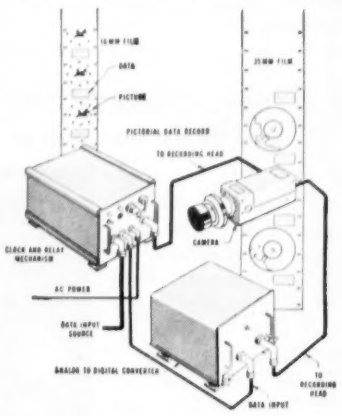


Working area is accessible from either front or rear of this improved angle type powdered metal forming press. Capacity of main ram is 1000 tons and side ram, 750 tons. Independent hand lever control is provided for each ram. Mechanical interlock prevents movement of main ram until a predetermined tonnage is reached on the side ram. Proportioning type of control on both rams permits easy setup of dies. Both rams have rapid approach, slow pressing speed and rapid return. Press is available in a variety of die spaces and tonnages. A third or bottom pressing cylinder can be added. Made by **American Steel Foundries,** Elmes Engineering Div., 1150-S Tennessee Ave., Cincinnati 29, O.

For more details circle NED-202 G7 on enclosed inquiry slip

FILM & DIGITAL RECORDER 16 and 35-mm cameras can make up to 32 exposures per second

Advantages of film and digital data recordings are combined in this film data recording and reading system. It includes the camera with digital recording head, analog to digital converter, amplifiers, relays, control units, film reading system, de-coding section, print out equipment for visual examination of data and punched paper tape output recorders to permit further processing.



Applications include military and civilian control systems evaluation, theodolite recording, radar recording and document file systems. Available 16 and 35-mm cameras can make up to 32 exposures per second. Each exposure is a simultaneous view of the equipment under test and the related digitally coded data. At present camera speeds, 2880 bits of digital information per second can be recorded. Made by **Magnavox Co.,** Dept. NP, Bueter Rd., Ft. Wayne 4, Ind.

For more details circle NED-203 G7 on enclosed inquiry slip

COMPILED AT THE REQUEST OF

ENGINEERS

WRITE FOR THIS LATEST B&W CROLOY BULLETIN

Includes condensed data on Seamless Welding Fittings and Seamless Pipe and Tubing for high pressure service. Covers mechanical properties, creep strength, physical properties, welding, heat treatment, and working pressures. A necessary part of your reference material when concerned with selection of a matched piping system. Send today!

THE BABCOCK & WILCOX COMPANY

Tubular Products Division — Fittings Department

3839 West Burnham Street • Milwaukee 46, Wisconsin

THE *NATURAL* SOURCE FOR ALLOY FITTINGS

B&W TUBULAR PRODUCTS DIVISION

FLI—7904

For more details circle NED-204 G7 on enclosed inquiry slip

ALTEN Bar Stock

will Cut Expenses Increase Your Profits

Made from alloy iron, over 50,000 PSI tensile, and free from imperfections.

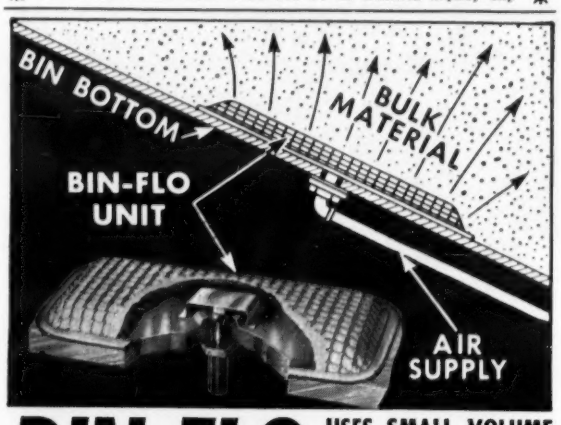
Alten Bar Stock has outstanding machining quality —will give high polish. Standard length is 16 inches to 3 feet—all diameters. Other shapes—flats, discs, squares, bushings are also available.

PROMPT DELIVERY

Bar Stock is available for immediate shipment from stock.

ALTEN FOUNDRY and MACHINE WORKS, INC. Lancaster, Ohio

For more details circle NED-205 G7 on enclosed inquiry slip



BIN-FLO

USES SMALL VOLUME OF AIR AT LOW PRESSURE

KEEPS BULK MATERIALS MOVING

BIN-FLO units in bins, chutes, hoppers, etc., restore flow characteristics to dry, finely ground materials which tend to pack or bridge in storage. Types for all materials and conditions. No moving parts; simple installation; negligible operating cost; no maintenance cost.

BIN-DICATOR the original diaphragm-type bin level indicator. In successful use for over 20 years. **ROTO-BIN-DICATOR** new, motor-driven paddle type; excellent on bins under pressure or vacuum, and for general application. Also explosion-proof units, U.L. listed.

THE BIN-DICATOR CO.

13946-A Kercheval • Detroit 15, Mich.

Write for detailed literature or call VAlley 2-6952

WE SELL DIRECT • PHONE ORDERS COLLECT

For more details circle NED-206 G7 on enclosed inquiry slip

Comwel Platform Lifts

Speed Receiving and Delivery. Provide greater safety in handling heavy machinery, crates, barrels, castings, etc. Loads quickly raised from floor level to truck or dock height. Retracting safety skirt optional.

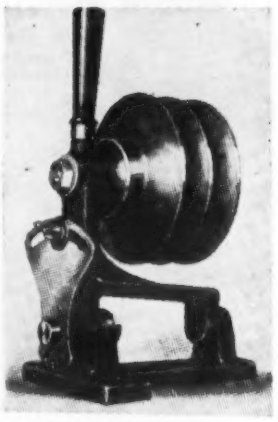
The COMWEL PLATFORM LIFT pays for itself many times over in saving time and manpower. Standard Model has capacity up to 10 tons. Other capacities available. Write or wire.

COMWEL COMPANY

2899 Norton Ave. Lynwood, Calif.

For more details circle NED-207 G7 on enclosed inquiry slip

VARIABLE SPEED CONTROL



Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including: plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H.P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameter, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **Adv.**

For more details circle **NED-208 G7** on enclosed inquiry slip

Schrader® AIR-HYDRAULIC ROTATING PRESSURE JOINTS

for high-speed rotation, high pressure

Now you can be sure of dependable compressed air or hydraulic installations through high-speed shafts and axles. Just specify Schrader's new Rotating Pressure Joints. Connecting a rotating member and a fixed unit, these compact, ball-bearing mounted joints assure a minimum of friction and long life. They are designed for pressures up to 400 psi and speeds up to 5000 rpm. Available with rugged steel mounting flanges to minimize vibrations encountered in high-speed operations of 2000 rpm or higher. Write for free Schrader catalog.

A. SCHRADER'S SON
Division of **SCOVILL**
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

For more details circle **NED-209 G7** on enclosed inquiry slip

LIFTER-DUMPERS
handle 75 loads of 400 lb hourly

Models to dump at any height from 2 to 8 ft comprise the Cesco Jr. line of mechanical lifter-dumpers. Stationary models are built for dumping at any height required. Lightweight machines are capable of handling seventy-five 400-lb loads per hour. They can also be equipped with changeable skips for handling drums, barrels, boxes and bags. Push-button controls and a single or three-phase ¼-hp motor are incorporated. Made by **Essex Conveyors, Inc.,** Dept. NED, 165 Franklin Ave., Nutley 10, N. J.

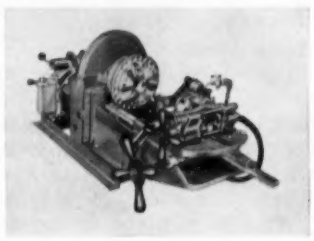
For more details circle **NED-211 G7** on enclosed inquiry slip

GAGE GLASS CLEANER
brushes clean inside of glass

Easily replaced, economical brushes are incorporated in improved tool for quickly cleaning the inside of liquid level gage glasses. Tool consists of a stainless steel rod with a bronze T-handle, operating inside a stainless steel tube. Wiping mechanism is two commercially available brushes which screw into a holding plate. Standard 3-ft long tool sells for $31. Longer or shorter lengths are available in multiples of 1 ft. Made by **Jerguson Gage & Valve Co.,** 80 Adams St., Burlington, Mass.

For more details circle **NED-212 G7** on enclosed inquiry slip

PIPE & BOLT THREADER
machine's weight reduced to 260 lb



Heavy-duty model A pipe and bolt threading machine has been reduced in weight to 260 lb by the use of aluminum alloy castings. Machine has rack and pinion feed, right-hand lathe-like operation, and will thread 2-in. pipe in 15 seconds. All gears run in oil. Lighter weight adds to portability. Mono-type, duo-type and quadra-type die heads are available with high-speed steel dies. Wheel or automatic knife cutoff can be chosen. Range is ⅛ to 2 in. pipe, ¼ to 2 in. bolts and up to 12-in. with drive shaft and geared tools. Motors are 110/115 or 220/230 v, 25/60 cycle universal; or 220/440 60-cycle three-phase. Made by **Beaver Pipe Tools, Inc.,** 310 Dana Ave., Warren, O.

For more details circle **NED-213 G7** on enclosed inquiry slip

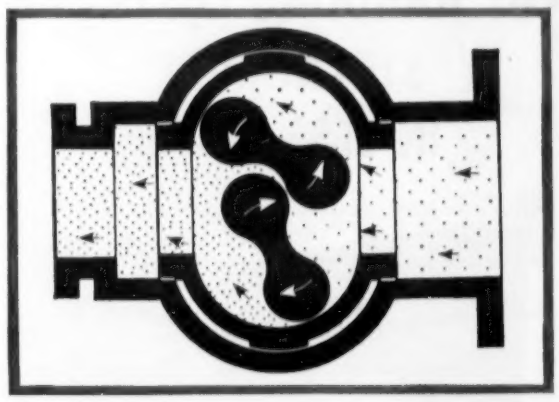
IT TAKES MORE
than a quality towel to cut towel costs

MOSINEE Towels absorb water faster than competitive towels. But absorption quality alone cannot reduce towel consumption enough to substantially cut costs. It takes controlled dispensing — with Mosinee Turn-Towl cabinets — to cut towel consumption from 40% to 50%. The Turn-Towl combination is serving thousands of users satisfactorily.

Try Turn-Towl Service yourself. Write today for the name of your nearest Mosinee Towel Distributor.

BAY WEST PAPER CO.
1130 West Mason St., Green Bay, Wisconsin
A Subsidiary of Mosinee Paper Mills Co.

For more details circle **NED-214 G7** on enclosed inquiry slip



The Roots pump...produces vacuum high and dry—fast

Probably the world's fastest mechanical vacuum pumps in the 10^{-1} to 10^{-5}mm Hg range, the new Roots Pumps eliminate oil vapors from your vacuum system.

Their finely machined rotary pistons (see diagram) never touch one another or the pump casing. Result: a pumping action which needs no oil sealing, cannot contaminate a system with backstreaming vapors.

You get all these advantages with a Roots Pump:

1. Extraordinary pumping speed. The 39" x 20" x 22" model shown below has a throughput of 10,400 micron-cu. ft. per minute at 10 microns.

2. Motor operates within the vacuum, eliminating need for shaft seals, source of frequent leaks.

3. Exceptionally quiet, vibration-free operation.

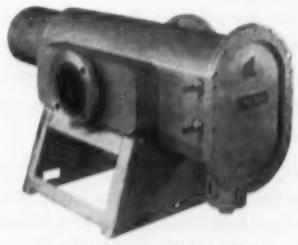
4. Very low power consumption.

5. Roughing done directly through the pump with no by-pass or valving needed.

6. Pump starts automatically at a predetermined forepressure in the 10 to 20mm Hg range (except on smallest model).

Heraeus of Hanau, Germany, manufactures the Roots Pumps. CEC is the exclusive agent for all seven models in this country.

For data on performance and theory of operation, send for Bulletin P-8-20.



Roots Pump Model VP-R 1600 —one of seven Roots Pumps.

Consolidated Electrodynamics
Rochester Division, Rochester 3, N. Y.
formerly Consolidated Vacuum

OFFICES IN PRINCIPAL CITIES THROUGHOUT THE WORLD

For more details circle **NED-215 G7** on enclosed inquiry slip

1 HOUR to bend 1200 Pieces
of WIRE, STRIP METAL or TUBING
with CAR-ANTH PNEUMATIC
POWER BENDER
at a fraction of the cost of Automatic Equipment

NOTE THESE FEATURES: Timken bearing equipped • Protective hood • Powerful—air cylinder • Pressure Ratio 10 to 1 • Interchangeable pin • Adjustable Stroke Stop—Any degree of bend up to a complete loop • Bench operated with foot pedal • Mounted on heavy steel base • Can make up to 1200 bends per hour • On small diameter wire bend 2 or more at a time • Operates entirely by air pressure • Experienced operators not necessary • Set up in 5 minutes • Bend wire and strip metal up to 2" radius • maximum ⅜" in bright basic wire • Can be adapted to tube forming • All strokes the same • Complete, ready to operate by merely attaching to air line. Valve and 10 ft. of hose furnished.

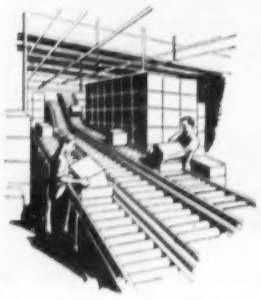
Send pieces of material and drawing or sketch of job you want done.

Write for more information of what it will do. **CAR-ANTH Mfg. & Supply Co.** 411 Eichelberger St. Louis 11, Mo.

For more details circle **NED-210 G7** on enclosed inquiry slip

Mathews ROLLER CONVEYERS

ENGINEERED TO SERVE PRODUCTION



One of the many widely applied types of conveying equipment designed and built by Mathews Conveyer Company. The complete line of Mathews-designed, Mathews-built Conveyers includes the following:

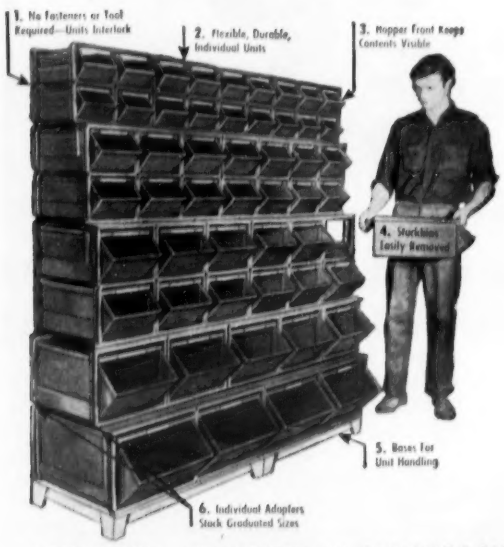
CHAIN CONVEYERS • LIVE ROLLER CONVEYERS • WHEEL CONVEYERS
BELT CONVEYERS • TROLLEY CONVEYERS • ROLLER SPIRAL CONVEYERS
PORTABLE CONVEYERS • SPECIAL CONVEYING MACHINERY
ELEVATING CONVEYERS

MATHEWS CONVEYER COMPANY
GENERAL OFFICES . . . . . ELLWOOD CITY, PENNSYLVANIA
PACIFIC COAST DIV. . MATHEWS CONVEYER COMPANY WEST COAST, SAN CARLOS, CALIFORNIA
CANADIAN DIVISION . . . . MATHEWS CONVEYER COMPANY, LTD., PORT HOPE, ONTARIO

MATHEWS
Fifty Years of Leadership in Mechanized Handling

For more details circle NED-216 G7 on enclosed inquiry slip

CUT HANDLING COSTS - - - STOCK MORE IN LESS SPACE



LOW-COST, STACKBIN-IN-STACKRACK UNITS PAY FOR THEMSELVES IN 3 WAYS

SAVE SPACE — Individual units stack easily and lock securely as high and as long as you need. Seven different size units available.

SPEED PRODUCTION — Stackbins reduce handling time. Can be used intra-plant in processing, sub-assembly, assembly and stockroom. Roller Bearing Slide Stackracks available for heavier contents. Locking Pallets supplied for unit load handling.

REDUCE INVENTORY TIME — Accessibility of Stackbins for weight count speeds inventory taking; visibility of contents simplifies control.

STACKBIN-IN-STACKRACK COMBINATIONS are made of heavy gauge steel with all welded construction and baked enamel finish.

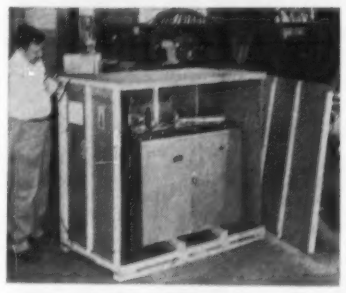
LOW-COST STACKBIN PRODUCTS ARE SOLD DIRECT — A factory trained, Stackbin Sales Engineer will study your plant requirements, at no obligation, and will make specific recommendations for handling and storage efficiency. Buy only as many units as you need.

WRITE TODAY FOR FULL INFORMATION
STACKBIN CORP. 1081 Main St., Pawtucket, R. I.
Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

STACKBIN SYSTEM
"Stacked and Still Accessible"

For more details circle NED-217 G7 on enclosed inquiry slip

SHIPPING CONTAINER
45-degree corner braces afford strength and fast assembly



Fast assembly and disassembly, structural strength with few structural members, light tare weight, 45-degree diagonal bracing on corners and minimum steel strapping requirements are among advantages of this Evans shipping container. Unit uses easily-replaced, interchangeable panels which are assembled, locked and braced by inserting tubular metal spindle into 45-degree slots in the eight corners of each container.

No nails, screws, clamps or other fasteners are used. A pallet base can be built integral with container itself. Containers can be constructed of fiberboard, plywood, paper overlaid veneer, or wood for shipping items from 300 lb to 1 ton. They can be shipped knocked-down. Made by **Evans Container Corp. of Los Angeles,** Dept. 618, 5832 E. 61st St., Los Angeles 22, Calif.

For more details circle NED-218 G7 on enclosed inquiry slip

EXPANSIBLE BENCH SYSTEM
in-line, ladder, console and back-to-back arrangements possible

Interchangeable members of the Product - A - Flow modular expansible bench system allow changing from one design to another in about 15 minutes. System is made up of telescoping frame members and lift-out work panels which are used over and over for single or multiple in-line, ladder, console, back-to-back or combination of these arrangements. Working depths are adjustable up to 30 in. by pulling out the telescoping strut to size and locking it rigid with simple fastener.

Work station widths are changed by sliding front leg frames to left or right and locking them into position. Legs have height and leveling adjustment. As an option, each section can have provision for integral wiring, lighting and air, water and gas lines. Accessories include bench-top package conveyors, stationary and mobile equipment, storage racks, utility shelves, posture chairs and foot rests. Made by **Products For Industry,** Dept. A, 1530 Summer St., Stamford, Conn.

For more details circle NED-219 G7 on enclosed inquiry slip

Off 'n On in less than 2 minutes!

another Plus Value

... found in **NOPAK-MATIC** valves

LESS MAINTENANCE
FASTER MAINTENANCE

Eliminate costly maintenance and downtime. Entirely new design assures longer, trouble-free operation . . . fast maintenance. Every model is subplate mounted and piping does not have to be disturbed. Loosen four screws and replace a complete unit in minutes. Even "in-the-line" maintenance is shortened with replaceable seats and interchangeable pilot heads.

NOPAK-MATIC valves meet all J.I.C. Standards.

CATALOG 105 describes in detail all of the new and important advantages of Nopak-matic 2-, 3-, and 4-Way valves. Your catalog will be forwarded *promptly*, upon request.

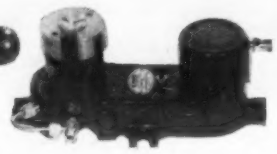
NOPAK VALVES and CYLINDERS
GALLAND-HENNING NOPAK DIVISION • 2755 S. 31st St., Milwaukee 46, Wis.

A6-606-1/9

For more details circle NED-220 G7 on enclosed inquiry slip

REDMER AIR DEVICES...

REDMER INDEX CHUCK
with air operated collet. The REDMER Index Chuck Model No. RC-5 has 12 indexing positions and collet capacity of 1/16" to 2". Uses Brown & Sharpe type collets No. 22 and No. 11.



The REDMER Collet Air Chuck
The REDMER Collet Air Chuck is an air-operated collet holding fixture using Brown & Sharpe type collets. Equipped with air ejection for oil flushing. Capacities 1/16" to 3½".

The Redmer Foot Control and Valve

The REDMER Foot Control and Valve reduces operator fatigue in all cases where air control is necessary. Valve is a brass casting useable as a separate unit with cam operations. Foot Control No. FC-28; valve No. V-29.

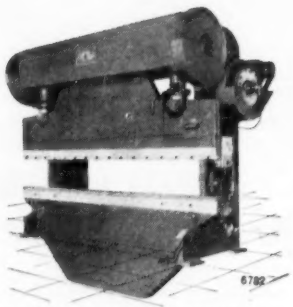
REDMER AIR DEVICES, Inc.
Box 247, Guntersville, Alabama
9128 W. Belmont, Franklin Park, Illinois

For more details circle NED-221 G7 on enclosed inquiry slip

CHICAGO DREIS & KRUMP

Advanced Design
PRESS BRAKES

50
Standard Sizes
•
Capacities
11 to 450 Tons



Complete recommendations for any job on request

CHICAGO DREIS & KRUMP
Press Brakes • Straight-Side-Type Presses • Press Brake Dies
Hand and Power Bending Brakes • Special Metal-Forming Machines

DREIS & KRUMP MANUFACTURING CO.
7436 South Loomis Boulevard, Chicago 36, Illinois

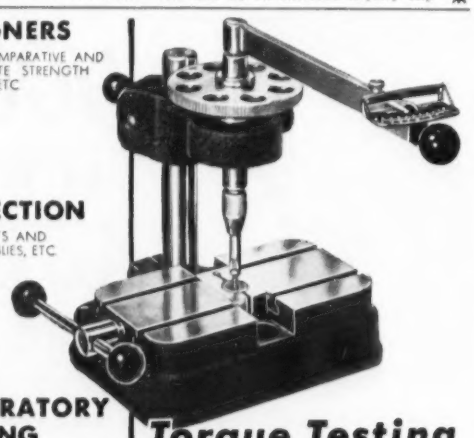
For more details circle NED-222 G7 on enclosed inquiry slip

DESIGNERS
for COMPARATIVE AND ULTIMATE STRENGTH TESTS, ETC.

INSPECTION
of PARTS AND ASSEMBLIES, ETC.

LABORATORY TESTING
of SCREWS
SOCKETS
TAPS
LOCK NUTS
DRIVING BITS
HAIR SPRINGS, ETC.

PRODUCTION QUALITY CONTROL
for DELICATE OPERATIONS, ASSEMBLY OF FRAGILE MECHANISMS OR INSTRUMENTS; FOR FASTENERS IN PLASTICS AND LIGHT METALS.



Torque Testing FIXTURE

A universal fixture with 1000 uses. Holds driver in accurate alignment; in instrument bearings. Provides rapid engagement with test sample...torque is applied and measured with Sturtevant Torque Wrench.

Model TTF¼ Capacity 0-200 in. lbs.
Model TTF½ Capacity 0-150 ft. lbs.

Write for Bulletin TF

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

For more details circle NED-223 G7 on enclosed inquiry slip

EISLER

FOR 35 YEARS

We supply any part or complete equipment . . . Special turntables made to order

INDEXING TURNTABLES

MORE THAN 100 DIFFERENT TYPES

- FOR WELDING • BRAZING • SOLDERING • SPRAYING
- GLASS INSULATOR MELTING AND GLASS GLAZING with rotating stations and indexing with barrel cam or Geneva gear action.
- For work transferring, tilting positions. . Motorized or hand operated.

Eisler Indexing Turntables are completely electrically controlled

AND CAMS MADE TO YOUR SPECS!

Manufacturers' representatives wanted

EISLER ENGINEERING CO., INC.

740 SO. 13th ST., NEWARK 3, N. J.

Charles Eisler, Jr., President

For more details circle **NED-224 G7** on enclosed inquiry slip

"Machinery Analyzer Saves Us $1000 Per Hour"

"We've had total savings of more than $100,000 since we purchased the analyzer three years ago. The analyzer has been shipped over 100,000 miles by air, rail, and car to our eight plants without need for repairs or replacements" — reports a leading chemical processor.

The Machinery Analyzer — actually a portable IRD Vibration Analyzer — is used for . . .

- TROUBLE SHOOTING — to pinpoint faulty components exciting vibration, *without costly dismantling.*
- MEASURING DISPLACEMENT — to accurately determine the condition of machinery, *without costly dismantling.*
- IN-PLACE BALANCING — to dynamically balance at operating speed the accessible rotating components, *without costly dismantling.*

Here are several examples cited by company officials:

- Detecting a broken gear in an important gear reducer saved a major loss of production.
- Savings of $2000 in balancing a ringer assembly, because dismantling and loss of production were eliminated.
- A 450 HP motor was balanced, in place, at savings of $8000 to $10,000 in production and maintenance costs.

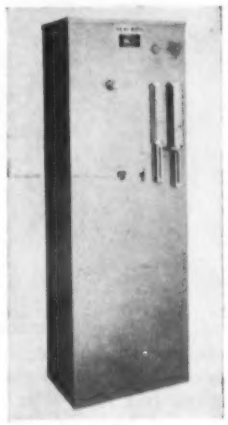
What portable IRD Vibration Analyzers are doing for this company — to reduce inspection, maintenance, and production costs — it can do for your company.

IRD

For further information — or an actual demonstration on your own machinery by an IRD field engineer—write today to International Research and Development Corporation, 797-NE Thomas Lane, Columbus 16, Ohio.

For more details circle **NED-225 G7** on enclosed inquiry slip

GAS CONVERTER
creates heat treating atmosphere



Manufactured, natural or bottled gas may be used in this automatic gas converter which requires no outside source of air to produce a prepared atmosphere suitable for hardening, bright annealing, sintering, tempering and other operations. Model CU 200-P has automatic ignition, and its gages, flow meters and sampling valve are panel mounted for easy inspection and adjustment. Generator capacity is 200 cfh of prepared atmosphere. Cabinet measures 15 x 24 x 72 in. Made by **Hevi-Duty Electric Co.,** Box 563, Milwaukee 1, Wis.

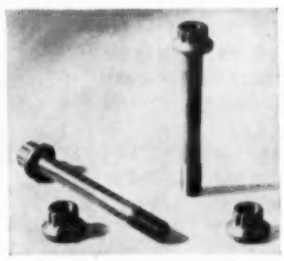
For more details circle **NED-226 G7** on enclosed inquiry slip

FLOODLAMPS
withstand severe shock in use

Designed for use on earthmoving equipment and other construction and industrial machinery, PAR-46 floodlamps will withstand severe shock when installed in appropriate housings. Three CIM lamps are rated at 6, 12 and 24 v and have all-glass, sealed beam construction. Dimensions and two-contact lug base comply with SAE standards. Prices range from $3.65 to $3.95. Made by **General Electric Co.,** Dept. 166-NED, Nela Park, Cleveland 12, O.

For more details circle **NED-227 G7** on enclosed inquiry slip

HEAT RESISTANT BOLTS
withstand heat up to 900° F

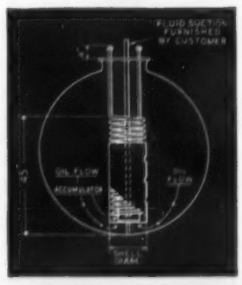


Minimum tensile strength of 170,000 psi at rated temperature of 900° F is feature of Hi Tm 9 bolts. Strength is 50 per cent over that of stainless and alloy steel fasteners used at this temperature. They are 12 - point external wrenching type aircraft tension bolts used for airframe fastening. Diameters range from ¼ to 1½ in. Fasteners are made from VascoJet 1000, a Vanadium-Alloys Steel Co. 5 per cent chromium hot work die steel. Hi R thread with larger-than-normal radius in the root of the thread and a diffused nickel cadmium plating for corrosion and oxidation resistance up to 1000° F are incorporated. Made by **Standard Pressed Steel Co.,** Box 581, Jenkintown, Pa.

For more details circle **NED-228 G7** on enclosed inquiry slip

Solve **STORAGE TANK OIL PREHEATING**

REMPE "Hot Spot" PREHEATER



All-steel shell and coil assembly for preheating No. 5 and Bunker "C" oils and other liquids to proper flow temperature before they enter the suction pipe. Positive preheating by flow accumulator.

Suction pipe, inlet and outlet pipes for heating by steam or hot water go through manhole cover. Made with 14" or 16" dia. shell.

WRITE FOR DETAILS.

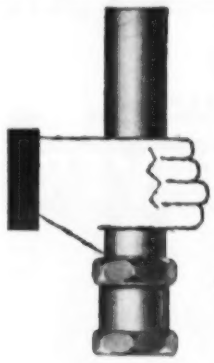
Complete facilities for fabrication of pipe coils — all types — all materials. Engineering service. Send details for price.

HEAT TRANSFER EQUIPMENT REMPE CO. Founded 1890

REMPE COMPANY

338 N. Sacramento Blvd., Chicago 12, Ill.

For more details circle **NED-229 G7** on enclosed inquiry slip

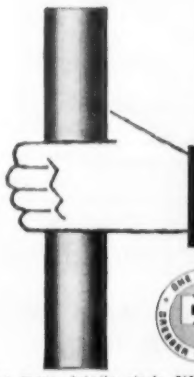


There's no easier way to join equipment piping than with Dresser Style 65 Fittings. Just stab plain pipe ends into factory-assembled fitting, tighten end nuts and you have a permanently tight, flexible joint. Dresser Fittings eliminate pipe threading, exact pipe fitting and alignment.

Speed up pipe joining with this fitting!

There's no welding, soldering, flaring, grooving or caulking. Every joint is a union. Sizes ⅜" to 2".

Complete line of couplings, tees, ells, etc. Write today for FREE catalog.



DRESSER®

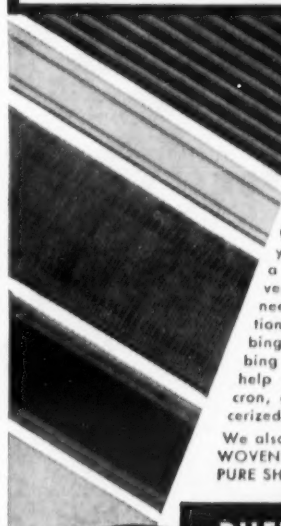
ONE OF THE DRESSER INDUSTRIES

MANUFACTURING DIVISION
30 Fisher Ave.,
Bradford, Pennsylvania

For more details circle **NED-230 G7** on enclosed inquiry slip

SAME BROTHER

on WEBBING



Do you need a "special" size, width, weight, plain color or fancy patterned webbing for your product? If so, DON'T pay a "special" price for it! You'll very likely find exactly what you need among our tremendous selection of hundreds of STANDARD webbing. We are America's oldest webbing manufacturer and can definitely help you save on cotton, nylon, dacron, dynel, jute combed peeler mercerized and high tensile.

We also manufacture a complete line of WOVEN COTTON CONVEYOR BELTS and PURE SHEET RUBBER

write for samples and prices!

BUFFALO WEAVING and BELTING CO. INC.

210 CHANDLER ST. BUFFALO 7, N. Y.

For more details circle **NED-231 G7** on enclosed inquiry slip

WHEN IT COMES TO NUTS

. . . SPECIFY "*Fischer Turned*" BRASS AND ALUMINUM NUTS

for PRECISION

Produced by *turning* on unique high-speed machinery, Fischer nuts cut assembly costs through faster starting . . . smoother, easier running . . . elimination of "blanks" or rejects.

for PRICE

You pay no premium for Fischer *precision-turned* nuts . . . they cost no more than those produced by other, less accurate methods.

for DELIVERY

Prompt delivery is assured by large stocks of standard types and sizes . . . "specials" are produced quickly and economically.

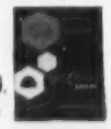
C-563-F8

Investigate the savings possible with Fischer-turned brass and aluminum nuts! Write today for Catalog No. 55 . . . or send specifications for price and delivery quotations.

TURNED NUTS Fischer SPECIAL MFG. CO. CINCINNATI OHIO SINCE 1906

Fischer SPECIAL MFG. CO.

461 Morgan St. • Cincinnati 6, Ohio

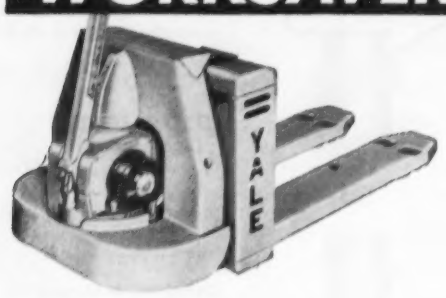


For more details circle **NED-232 G7** on enclosed inquiry slip

YALE

PALLET TRUCK

WORKSAVER



ONLY 24" LONGER THAN THE LOAD
New compact design of Yale *Worksaver* drive unit and battery compartment cuts down "lost space".

SWINGS OPEN FOR EASY MAINTENANCE
Removal of two pins permits one man to swing open entire front compartment for easy, quick maintenance.

New Yale *Worksavers* come in capacities of 4,000 and 6,000 lbs. Also, get the facts about other Yale *Worksaver* models. Write: The Yale & Towne Mfg. Co., Philadelphia 15, Pa., Dept. A-377.

YALE* INDUSTRIAL LIFT TRUCKS AND HOISTS
*REG. U. S. PAT. OFF.

For more details circle NED-234 G7 on enclosed inquiry slip

...for straight right-angle cuts every time...the new

RIDGID

Wide-Roll Pipe Cutter

fast true pipe cuts on your power drive

Rolls are twice the usual width, double the bearing surface on pipe—sure straight start of cut . . . by hand or power drive—extra fast and easy. Pays you to see it before you buy your next cutter—at your Supply House.

No. 201, ⅛" to 1¼"
No. 202, ¼" to 2"

The Ridge Tool Company, Elyria, Ohio, U.S.A.

RIDGID
Work-Saver Pipe Tools

For more details circle NED-235 G7 on enclosed inquiry slip

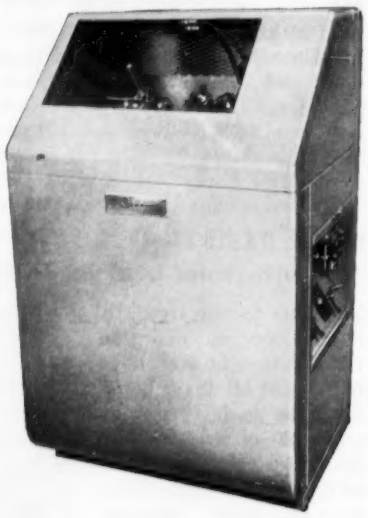
INSERT MILLING CUTTER
uses throw-away indexing cutters

Available with square or triangle indexable carbide inserts, series 900 milling tools employ Super-Jack blade locking wedges. Heat treated alloy steel bodies are of two-part design so that all bearing surfaces can be precision ground. Wedges lock inserts securely and accurately when tightened with hex wrench. Use of carbide chip deflectors in front of each insert assures flow of chips away from cutting area. Interchangeable with standard cutters, tools are available in four standard sizes each of end mills and face mills. Made by **McCrosky Tool Corp.**, 1900 S. Main St., Meadville, Pa.

For more details circle NED-236 G7 on enclosed inquiry slip

SPRAY-MASK PAINTERS
seven models adapt to variety of complex small-part finishing jobs

Painting and decorating jobs involving wide variety of shapes and contours on small parts can be done with 5M series of automatic spray-mask painting machines. Any of the seven models can be adapted to handle more than one part or one color at a time as a multiple-station, or a multiple color unit.

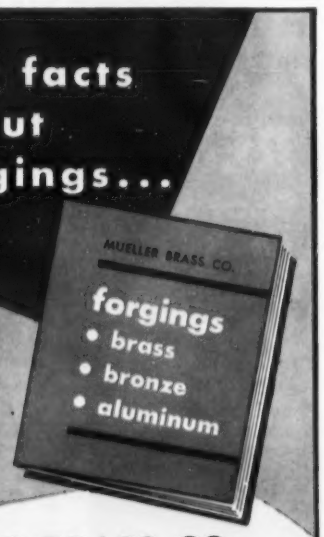


Three (SG) stationary gun models have two, three or four guns, clamp-mounted for easy positioning and adjustment to any angle and distance from work. Four (OGU) oscillating gun unit models can be adjusted to handle complex finishing involving bridging, multiple-angle planes, highs, lows and complicated contours. A rotary spray station (RSS) is available on any of the seven models.

All models are air operated and have only three connections—¼-in. paint supply, ¾-in. air supply and 8-in. exhaust duct. Cabinets measure 42 x 26 x 23 in. and mask opening is 18 x 10½ in. Made by **Sepanski & Associates,** Dept. NED-5, 900 Clancy Ave. N. E., Grand Rapids, Mich.

For more details circle NED-237 G7 on enclosed inquiry slip

get the facts about forgings...



from the world's largest producer of brass, bronze and aluminum forgings . . .

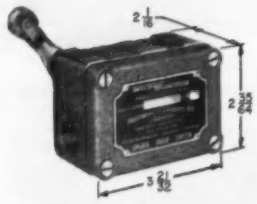
MUELLER BRASS CO.
PORT HURON 37, MICHIGAN 195

Please send me a copy of your ENGINEERING MANUAL H-58565
NAME
COMPANY
ADDRESS

For more details circle NED-238 G7 on enclosed inquiry slip

MICRO SWITCH ... FIRST IN PRECISION SWITCHING

Here's the switch to use in those wet, damp locations



With roller-arm (shown) or straight plunger actuator. Available with variety of circuitry and ratings.

This MICRO SWITCH Precision Switch, one of a number in the OP Series, combines precision snap-action switching with rugged, sealed construction. It makes an ideal component where splash of oil, water or other coolants is present. A heavy aluminum housing protects the switch from physical damage. A gasket between the cover and housing seals against moisture. Underwriters' Listed for 15 amperes 125, 250 or 460 v ac; ½ ampere 125 v dc; ¼ ampere 250 v dc. (Send for Catalog 83).

Full of invaluable ideas . . . FREE

MICRO Tips is a "How others do it" publication—full of practical uses for snap-action switches. If not on our mailing list, write today. Back copies sent on request.

MICRO SWITCH
A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
In Canada, Leaside, Toronto 17, Ontario • FREEPORT, ILLINOIS

For more details circle NED-239 G7 on enclosed inquiry slip

you buy more dependability in McGILL® 7000 series portable lamp guards

New Gray Neoprene-Butyl handle.
Exclusive quick release clamp.
Extra heavy-duty wire cage
Underwriters' Inspected

Neoprene-Butyl handle offers greater life, superior grease resistance, and resists deterioration even under the most rugged industrial service. No. 7100-SR (left) has exclusive thumb release clamp that lets you change bulbs without tools. Extra heavy cages are electrically welded, zinc plated with bright chromate finish. Available with LEVOLIER switch, or keyless, with or without 18-2SJ black rubber cord.

Available from Electrical Wholesalers

No. 7100-SR

WRITE FOR McGILL CATALOG NO. 84 TODAY

YOU CAN DEPEND ON McGILL QUALITY

McGILL MANUFACTURING CO., INC. 151 N. Campbell St. Valparaiso, Indiana

For more details circle NED-240 G7 on enclosed inquiry slip

THIS FREE HOW-TO-DO-IT BOOKLET

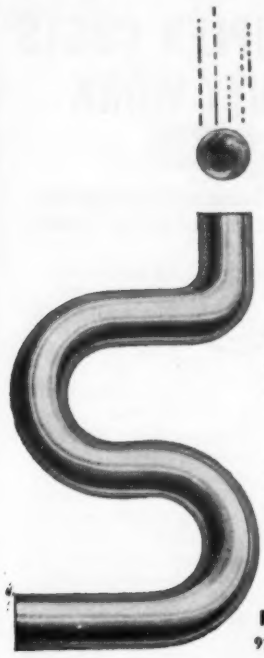
can save you time and money

Ever figure how much it costs in lost production to disassemble or assemble elevator terminals when sprocket replacement is necessary? This job can now be made a lot easier and less expensive if you use Rex Sprockets and Traction Wheels with Segmental Rims. Your free Bulletin 55-55 gives you all the details. It points out how simple it is to install Rex Sprockets and Traction Wheels and Segmental Rims...and shows you how the rims can be reversed to double the wear life of the teeth.

Send today for your copy of Bulletin 55-55. CHAIN Belt Company, 4686 West Greenfield Avenue, Milwaukee 1, Wisconsin.

CHAIN BELT COMPANY
Milwaukee 1, Wisconsin

For more details circle NED-241 G7 on enclosed inquiry slip



PASSING THE MARBLE-TEST!

The sign of a perfect bend!

Zip--the marble goes right through--no hesitation--no hang-ups.

If you need this kind of precision tube bending then you need a BENDMASTER tube bending machine.

LEONARD PRECISION PRODUCTS CO.
9200 BOLSA AVE., SANTA ANA, CALIF.

Manufacturers of Tube bending and fabricating machines, tools, dies and special machinery

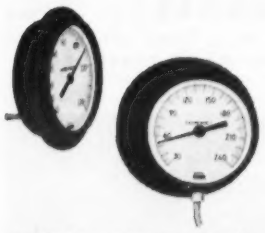
For more details circle NED-242 G7 on enclosed inquiry slip

3 WAYS TO MEASURE TEMPERATURE

bi-metal THERMOMETERS

for industrial and "built-in" needs

Overwhelmingly preferred because of their all-metal ruggedness, stability and long life. In heavy duty types, straight and angle forms, 6" and 5" dia heads – industrial types, angle form, 3" and 2" heads; stainless steel stems, lengths from 2½" to 24". Ranges low as – 100 F to high as 1000 F; accuracy 1% of range.



filled system THERMOMETERS

for remote readings—alarms

Available with mercury, liquid, gas filled, or vapor pressure actuations in 5", 6" and 8" dial sizes – for wall or flush mounting. Models to indicate as low as – 325 F or as high as 1000 F. Available with adjustable electrical contact and index pointer for signal or alarm needs.

electrical resistance THERMOMETERS

for remote and multiple readings

Resistor bulb permits remote temperature readings – and by use of several bulbs, several different remote temperature measurements can be made using a selector switch. Accuracy 1% of full scale. Range low as – 100 to high as 500 F.

For literature write . . .
Weston Electrical Instrument Corp., Newark 12, N. J.

WESTON A DAYSTROM UNIT
THERMOMETERS

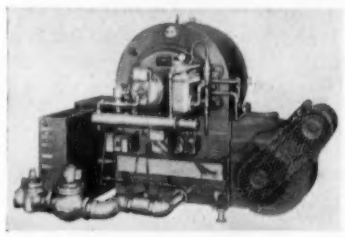
For more details circle NED-243 G7 on enclosed inquiry slip

NYLON CABLE CLIPS speed up cable anchoring jobs

Cable and tube anchoring operations are facilitated by these black nylon snap clips. User simply pinches the ends of the clip together, inserts it into mounting hole and lets go. Clips have excellent insulating properties, resist corrosion and are nonmagnetic. They retain toughness over wide range of temperatures. Made by **Weckesser Co.**, Dept. NDC, 5701 Northwest Highway, Chicago 30, Ill.

For more details circle NED-244 G7 on enclosed inquiry slip

PACKAGED BURNER for boilers, burns gas and/or oil



Factory assembled and designed for use with any type of boiler for forced draft operation, this packaged burner has rated output capacities from 90 to 750 hp. Specifications can be selected to burn any grade of fuel oil from light No. 2 to heavy bunker C, high or low pressure gas, or combination units for gas or oil. It consists of burner, belt-driven forced draft fan with speed adjustments, refractory lined windbox, wired and enclosed control cabinet, and ignition and electronic safeguard system. Made by **Ray Oil Burner Co.**, 1306 San Jose Ave., San Francisco 12, Calif.

For more details circle NED-245 G7 on enclosed inquiry slip

GRINDING MACHINES have dust collecting bases

Complete line of Grind-Air-rester grinders with self-contained dust collecting systems includes new 7, 8 and 10-in. sizes along with previous 12 and 14-in. sizes. Cabinet-base contains the dust collecting system. Floor space required compares with conventional grinders. These units arrest grinding grit and dust at its source, protecting workers' health and minimizing exposure of adjacent machinery to harmful contaminants. Made by **Standard Electrical Tool Co.**, 2488 River Rd., Cincinnati 4, O.

For more details circle NED-246 G7 on enclosed inquiry slip

RELIEVE EMBRITTLEMENT

with a DESPATCH "RS" OVEN

This Despatch RS-3 oven is used 16 hours a day at temperatures up to 550° F. Installed at the St. Paul, Minn. maintenance shops of Northwest Airlines, it is used in several important baking procedures. This includes stress relief from welding as well as relief of hydrogen embrittlement from plating on crank cases, landing gears, couplings, propeller shafts, knuckle pins, brake discs and other parts.

Specifications: Despatch RS-3 Oven, 48" x 48" x 72" inside. Electric: 17 or 26 KW; Gas: 83 CFH. 22 ga. steel with 3" or 5" Rockwood insulation.

Wherever electroplating is done, there's a Despatch Oven available for relief of embrittlement. Physical properties of the steel are largely restored and hydrogen is substantially removed by the heating process. Plated parts are usually baked from 1 to 5 hours at 375°-650° F. It is recommended that the baking operation begin immediately after plating and before the plated surfaces have been otherwise treated.

Write for fully illustrated No. 200 Bulletin

DESPATCH OVEN CO. Established in 1905

DESPATCH OVEN CO.
325 Despatch Building
Minneapolis 14, Minn.

For more details circle NED-247 G7 on enclosed inquiry slip

"PARTNERS" WITH AUTOMATION

Speed production, eliminate inventory problems, reduce waste.

SEND FOR FREE ENGINEERING BULLETIN S-49

EATON RELIANCE DIVISION
MANUFACTURING COMPANY
509 CHARLES AVENUE • MASSILLON, OHIO

SALES OFFICES: NEW YORK • CLEVELAND • DETROIT
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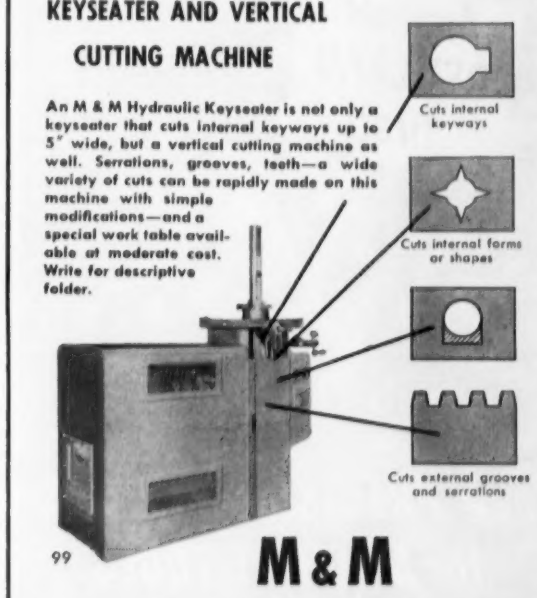
For more details circle NED-248 G7 on enclosed inquiry slip

TRIPLE THE USEFULNESS OF YOUR M&M KEYSEATER AND VERTICAL CUTTING MACHINE

An M & M Hydraulic Keyseater is not only a keyseater that cuts internal keyways up to 5" wide, but a vertical cutting machine as well. Serrations, grooves, teeth—a wide variety of cuts can be rapidly made on this machine with simple modifications—and a special work table available at moderate cost. Write for descriptive folder.



99

M & M

KEYSEATERS AND VERTICAL CUTTING MACHINES

MITTS & MERRILL • 1000 So. Water St. • SAGINAW, MICH.

For more details circle NED-249 G7 on enclosed inquiry slip

LAMINATED PLASTIC PARTS a few or 1,000,000

A variety of specialized equipment plus a versatile organization enables you to look to Synthane for fabrication of component parts in either limited or production quantities.

Easiest way to benefit from these facilities is to let us fabricate parts for you from Synthane laminated plastics. Then you can be sure of the right materials, the newest fabrication methods, the proper dies, jigs, tools and fixtures, central control—and delivery in good time without tooling up, rejects or production worries.

You furnish the print; we'll furnish the part.

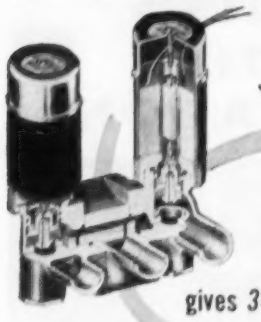
SYNTHANE

SYNTHANE CORPORATION
N.E. River Rd., Oaks, Pa.

☐ Please get in touch with me about a specific problem
☐ Send me your complete catalog of Synthane laminated plastics and machining facilities.

NAME_____
ADDRESS_____
CITY_____ ZONE_____ STATE_____

For more details circle NED-250 G7 on enclosed inquiry slip



NEW! Atkomatic

duplex SOLENOID VALVE gives 3-WAY FLOW CONTROL

for
• MIXING
• DIVIDED FLOW • CYLINDER CONTROL

This versatile new solenoid valve gives you automatic 3-WAY flow control of air, water, oil and fluids not harmful to Navy M Bronze. Two-Solenoid operation. Twin pilot-piston units work singly or together for specified flow control. Normally closed pressure range: 5-1000 psi; normally open: 5-500 psi. Plus Atkomatic's custom features; packless, bubble-tight construction; stick-free operation. In ½" and ¾" pipe sizes. Oversize inlet or outlet available for maximum flow.

FREE! Write for new Duplex Valve Bulletin

ATKOMATIC VALVE CO., Inc.
DEPT. 5J • 545 WEST ABBOTT STREET
INDIANAPOLIS, INDIANA

For more details circle NED-251 G7 on enclosed inquiry slip

PERFECT BALANCE—NO VIBRATION

Reuland Precision Motors are a complete new type especially made for powering machine tools. They are built to precise specifications and are dynamically balanced for vibrationless running. Heavy-duty ball bearings on each side of the rotor retain this characteristic which is so vital to precise work.

These motors are also of the radial air gap design and permit a thinner, light weight, low-inertia rotor. Besides a much shorter over-all, this lighter rotor permits smooth starts and quick stops. (Available in T.E.N.V. and T.E.F.C. Types)

SMOOTH CASTINGS—PLEASING LINES

All castings are especially processed for smoothness and are given a baked enamel finish. This fine-quality finish, together with the motors' naturally pleasing lines, assures a harmonious blend with the lines of every machine on which they are mounted.

Please request Reuland Precision Motor booklet No. PM-1010

Other REULAND firsts!
• Motor with internal fluid coupling
• All-aluminum motor frames
• "Through-Shaft" magnetic disc brakes
• Foot mounted magnetic disc brake complete with bearings and shaft
• Slip Ring meters in small #66 frames

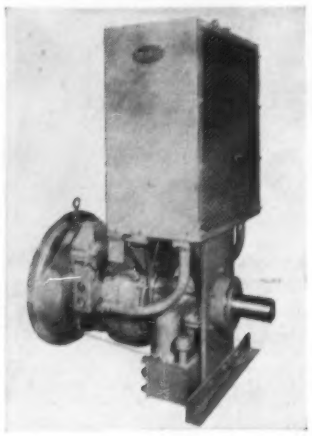
Free general catalog of the COMPLETE Reuland line of *Standard* and *Special* Motors sent on request.

REULAND MOTORS

REULAND ELECTRIC COMPANY
Western Division: Alhambra 90, California
Eastern Division: Howell 90, Michigan
Distributors in all principal cities

For more details circle NED-252 G7 on enclosed inquiry slip

TORQUE CONVERTER is rated 586 hp at 2200 rpm



Heavy-duty 11,500 series three-stage torque converter rated at 586 hp at 2200 rpm has maximum input torque of 1400 lb-ft. Impellers are available for specific torque ratings of 340, 390, 450, and 540 lb-ft. Model CF provides clutch at flywheel, whereas model F is connected to flywheel with driving ring. A C-3 rear end, with output shaft supported by two heavy-duty roller bearings, is available with either model, allowing maximum sidepull to be taken from the torque converter. Integrally-supported radiator is optional. Made by **Twin Disc Clutch Co.,** Hydraulic Div., Dept. ND-2, Rockford, Ill.

For more details circle NED-253 G7 on enclosed inquiry slip

ELECTRIC TAPE WINDER has variable speed and tension

This electric winder for common language tape adjusts automatically to output speeds from 0 to 240 lines per second at the core and is instantly adjustable to tensions from ½ to 15 oz-in. Other features include uniform "right side" winding, stalled torque principle, safety fusing, no interference signal, no springs or clutches and low power consumption. It starts, stops, winds slow, fast or intermittently at the command of the output and can wind from any angle or direction. Instant tape threading and pushbutton reel removal or replacement are also featured. Reels are offered in 8 and 12-in. sizes. Latter holds 1000-ft roll, either chad or chadless. Made by **Whiteford Laboratory,** 420 Market St., San Francisco 11, Calif.

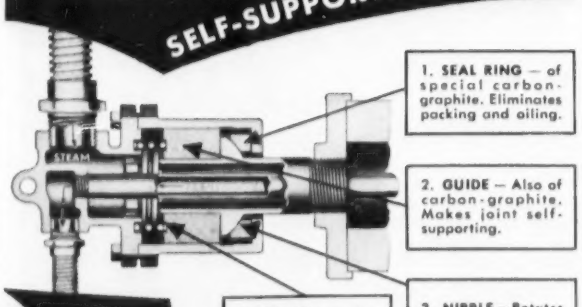
For more details circle NED-254 G7 on enclosed inquiry slip

Plastic Coatings

Protective Coatings, Inc.—"The Proco Encyclopedia of Liquid Plastics" is an application chart which prescribes the correct plastic coating for a wide variety of architectural, industrial and marine uses under a wide range of environmental conditions. Industrial applications include metal tanks and pipes, machinery, steel structures, manufactured articles and containers.

For more details circle NED-255 G7 on enclosed inquiry slip

JOHNSON Rotary Pressure JOINT
SELF-SUPPORTING TYPE



Only 4 Internal Parts

For introducing steam and liquids into rotating rolls and cylinders, there's nothing like the Johnson Joint above. It's packless, self-lubricating, self-adjusting, self-supporting. It has been adopted by dozens of machinery makers, and is finding new uses every day.

Type SB shown handles both steam and condensate through same head; also available for through flow service, and in sizes and styles for all operating conditions. *Write for literature.*

The Johnson Corporation
812 Wood St., Three Rivers, Mich.

For more details circle NED-256 G7 on enclosed inquiry slip

Foster's AUTOMATIC Quick Detachable Coupler

CUTS YOUR COUPLER COSTS ON HEAVY DUTY WORK

for OIL, AIR and GREASE

Smaller and Lighter Than Most Light-Duty "ball-type" Couplers

THE FOSTERMATIC "BULLDOG" GRIP
"Dogs" are contoured to grip 41% of plug locking surface.

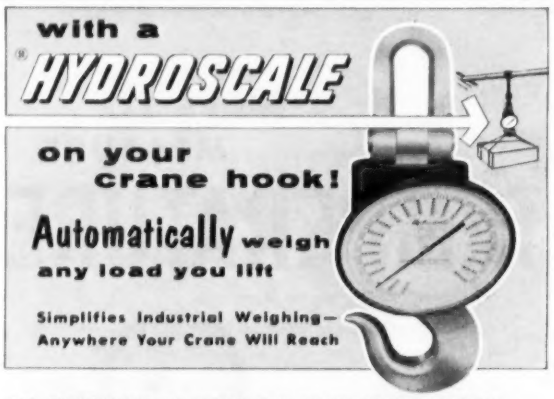
"Dogs" instead of "balls" lock steel against steel . . . hold tighter, without leakage . . . positioned by "floating steel carrier" which absorbs vibration of pulsating air. Chrome sleeve is of stress-proof, heat treated steel to withstand roughest treatment. The Fostermatic is right for 90% of all uses.

Send for New Catalog Data Book #110—No Obligation!

FOSTER MFG. CO., INC.
2850 Gravois, Dept. 2-C St. Louis 18, Mo.

For more details circle NED-257 G7 on enclosed inquiry slip

with a HYDROSCALE on your crane hook!



Automatically weigh any load you lift

Simplifies Industrial Weighing—Anywhere Your Crane Will Reach

ALL WEIGHING IS DONE ON YOUR CRANE HOOK
ENGINEERED AND BUILT FOR LONG SERVICE-LIFE
THERE ARE 110 MODELS IN THE COMPLETE LINE
TARE ADJUSTING KNOBS FOR NET LOAD READING
EASY-TO-READ DIALS AVAILABLE IN 3 SIZES

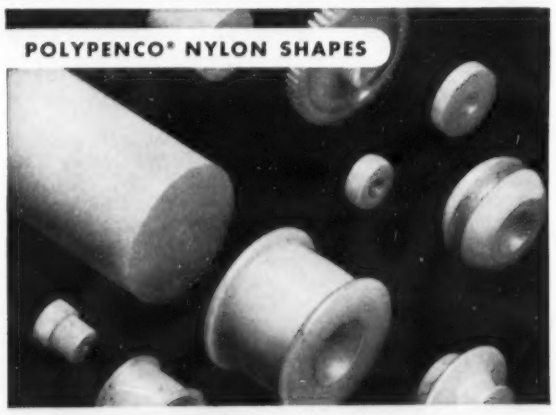
HYDROSCALES guaranteed
They are guaranteed to be free of defects in workmanship and materials, and to be accurate to ½ of 1% of the maximum dial capacity—

HERE ARE SOME TYPICAL WEIGHING APPLICATIONS
Just a few of the many applications include — loading, unloading, check weighing, batching, foundry charging, and protecting your equipment from overloading.

HYDROWAY SCALES, INC.
31288 Stephenson Highway • Royal Oak, Michigan
"The world's largest producer of crane scales"

For more details circle NED-258 G7 on enclosed inquiry slip

POLYPENCO* NYLON SHAPES



Nylon maintenance parts out-perform parts they replace

Tough, long-wearing nylon parts, machined rapidly and accurately from Polypenco nylon stock shapes are providing these definite advantages in more and more maintenance applications:

• *Wear resistance*
• *Resiliency*
• *High strength/weight ratio*
• *Low coefficient of friction*
• *Chemical resistance*
• *Noise dampening*
• *Good electrical insulation*
• *Abrasion resistance and non-galling*

Polypenco nylon shapes—which include rod, bar, tubular bar, strip and plate—are available for immediate delivery from warehouses located throughout the country. Polymer also maintains a custom fabricating service to produce parts. Write today for data on products and services.

THE POLYMER CORPORATION OF PENNA.
Reading, Penna.
Export: Polypenco, Inc., Reading, Penna., U.S.A.

POLYPENCO

POLYPENCO nylon, POLYPENCO Teflon†, NYLAFLOW® and NYLATRON® GS
†DU PONT TRADEMARK

For more details circle NED-259 G7 on enclosed inquiry slip

QUALITY DIE CASTERS:

Where You Want Perfect Die Castings with a Hardware Finish, Use

IMS PURE SILICONE MOLD LUBRICANT

FOR CLEANEST DIE CASTINGS

- NON-SMOKING!
- No Carbonaceous Deposits
- QUICK-EASY TO APPLY
- Handy Pressurized Can

LASTS LONGER BETWEEN DOSES!

PRICES (Delivered)

1 to 11 Cans, ea.	$2.00
Unbroken Doz.	$18.00
Unbroken Gross	$197.40

INJECTION MOLDERS SUPPLY CO.
3514 LEE ROAD • WYoming 1-1424 • CLEVELAND 20, OHIO

For more details circle NED-260 G7 on enclosed inquiry slip

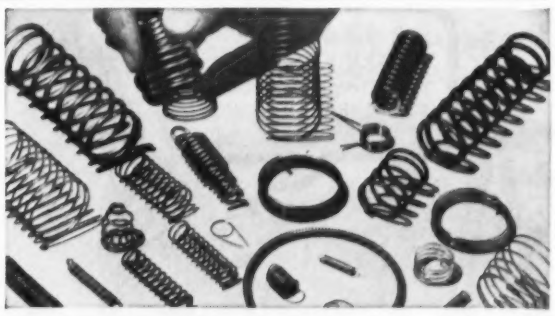
HIGH EFFICIENCY R&M-Hunter INDUSTRIAL FAN

For sidewall, penthouse, spot cooling

- 24" to 48" blades
- Effective up to 1/2" static pressure
- Totally enclosed motor
- Easily installed frame
- Streamlined air inlet
- Automatic shutters
- Certified air deliveries

For catalog and prices, write
HUNTER DIVISION — ROBBINS & MYERS, INC.
2458 Frisco Ave., Memphis 14, Tenn.

For more details circle NED-261 G7 on enclosed inquiry slip



fine wire

engineered for the toughest jobs

National-Standard specializes in development of wire for springs, wire forms and for unusual direct application:

- Drawn wire in fine sizes of titanium, stainless and high carbon steel with all customary and special finishes.
- Trucoat and Micro-Tin music spring wires (Tradenamed N-S developments).
- Brassply, Copperply and Nickelply electroplated wires (Tradenamed N-S developments).
- Special-purpose wire strand and flat and tubular braid in steel and other metals.

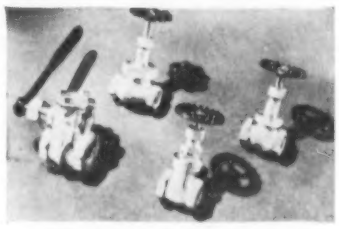
Indicate your requirements and write for details.

National-Standard Company • Niles, Michigan

NATIONAL STANDARD

For more details circle NED-262 G7 on enclosed inquiry slip

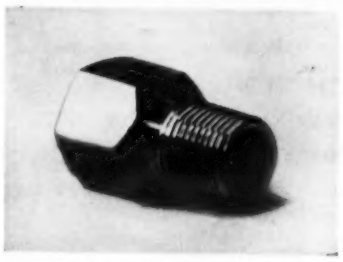
BRONZE VALVES
globe, gate and swing check types



Line of heavy duty bronze valves includes gate, globe and swing check types for working steam pressures up to 200, 300 and 150 psi, respectively. Shown (left to right) are No. 610 quick-opening gate valve with cam-operated solid wedge disk for 125-psi steam; No. 413 composition disk globe valve with union bonnet and slip-on type disk holder for 150-psi steam; No. 619 gate valve with solid wedge disk for 150-psi steam; and No. 412 brass disk regrinding globe valve with union bonnet for 150-psi steam. Made by **Hammond Brass Works,** Dept. NED, 1844 Summer Blvd., Hammond, Ind.

For more details circle NED-263 G7 on enclosed inquiry slip

PRESSURE SNUBBERS
have 1/8-in. NPT connections



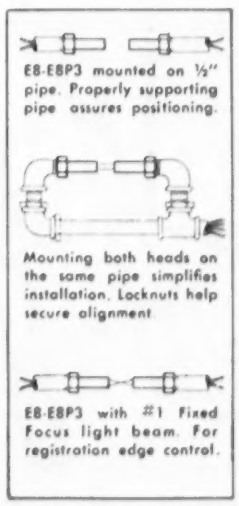
Fabricated of brass, aluminum or stainless steel for corrosion resistance, line of pressure snubbers includes three porosities for oil, water and gases, including steam. Intermediate porosities are available on order for use with various pressure transmitting media. They have 1/8-in. NPT male and female pipe connections. They protect pressure instruments against line pulsations and surges. Made by **Chemiquip Co.,** 460 W. Broadway, New York 12, N. Y.

For more details circle NED-264 G7 on enclosed inquiry slip

ELECTRIC WATER HEATER
110 or 220-v, 10-gal unit

Only 34 in. high with 18-in. diameter, this 10-gal capacity electric water heater operates on either 110 or 220-v ac. It is offered with a hot-dipped galvanized steel or Everdur copper silicon alloy tank. Also featured are steel jacket, brass drain faucet, magnesium anode and rock wool insulation. Made by **Electric Heater Co.,** Dept. NE, Stratford, Conn.

For more details circle NED-265 G7 on enclosed inquiry slip



Easy to Position in hard-to-get at places!

Half inch lens tube diameter, and 2" over-all length, combined with the flexible steel cable armor get these Small AUTOTRON Phototube and Light Source Heads into amazingly close places.

As shown in the diagrams, mounting on ½" pipe provides rigid support combined with conduit for wiring.

New literature, just off the press, describes these miniature heads; the Controls with which they may be used, and other new developments by AUTOTRON.

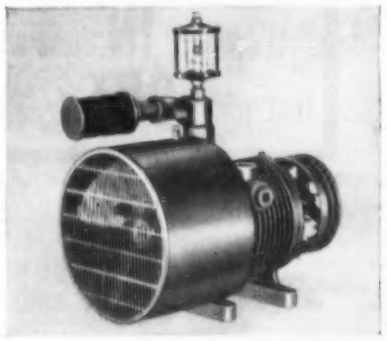
Send for your copy today!

AUTOTRON, INC.
Box 722-DW, Danville, Ill.

Representatives in Principal Cities

For more details circle NED-266 G7 on enclosed inquiry slip

BIG NEW fan-cooled rotary model 4565



GAST ROTARY AIR PUMPS

deliver 45 C. F. M. — double the capacity of previous models!

AS COMPRESSOR: 45 c.f.m., to 20 p.s.i.g. continuously with 5 h.p. at 1750 r.p.m.

VACUUM PUMP: 45 c.f.m., vac. to 25 in. hg. with 3 h.p. motor, 35 c.f.m. with 2 h.p.

Write for Bulletins 557-VP

Now ..... bigger-volume utility for original equipment or plant use! Built as either Compressor or Vacuum Pump for continuous, heavy-duty service. Air-cooled by 10" diameter pitch fan. Cowl-guard directs air—eliminates water-cooling headaches.

Long-lived, efficient 5-vane rotary design — positive, pulseless air delivery — needs no tank. Easy-to-mount v-belt drive. Three rows of ball bearings. Weight only 92 lbs.! Many applications.

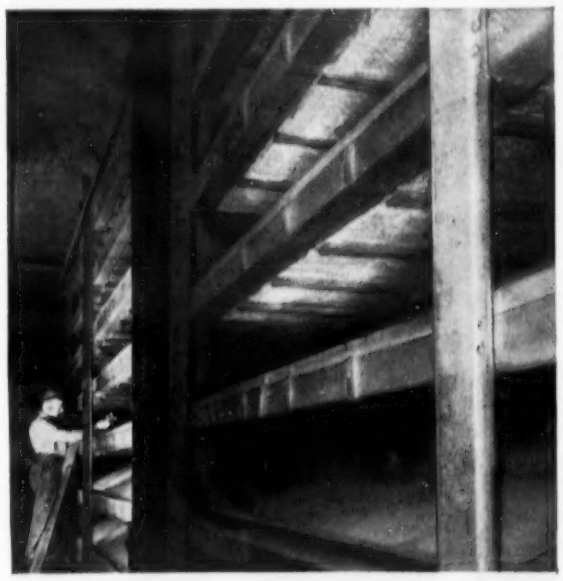
Gast Manufacturing Corp., P.O. Box 117-R. Benton Harbor, Mich.

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY
- AIR MOTORS TO 4 H.P.
- COMPRESSORS TO 30 P.S.I.
- VACUUM PUMPS TO 28 IN.

See Our Catalog in Sweet's Product Design File

For more details circle NED-267 G7 on enclosed inquiry slip



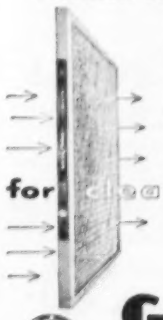
Cleaner Air with Half the Filters

A large metropolitan library was using banks of two 1"-thick throwaway filters in series to clean intake air. But the surfaces quickly clogged with dirt, and operating costs became excessive.

Then, they tried PLIOTRON—the world's first truly washable, electrostatic, panel-type air filter.

They soon found single banks of PLIOTRON, 1"-thick—*only half the number*—cleaned the air better, did not clog and were easily cleaned for repeated use. That's because the unique filter medium of PLIOTRON carries a permanent, electrostatic charge that actually attracts and captures up to five times as many fine dirt particles. It also permits depth-loading rather than surface-loading, and maintenance of full efficiency by simple washing.

PLIOTRON can bring greater efficiency to any forced-air heating or air-conditioning system using panel filters. For details see your PLIOTRON Distributor. Or write Goodyear, P. O. Box 283, Akron, Ohio.



for cleaner air everywhere—

PLIOTRON AIR FILTER BY GOODYEAR

THE GREATEST NAME IN RUBBER

Pliotron—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-268 G7 on enclosed inquiry slip

It's what's **IN** these wheels
That brings **OUT** big, new time-savings

A COMPLETELY NEW SLANT ON ABRASIVE APPLICATIONS

You can't tell by this picture that these Brightboy Wheels are compounded with RUBBER AND ABRASIVE (ALUMINUM OXIDE or SILICON CARBIDE) to cut finishing time tremendously — to BURR, CLEAN, FINISH, POLISH, frequently in ONE OPERATION! But the action of the rubber and abrasive quickly *shows you* a finish that's often the final polish—a one-step operation never before associated with abrasive applications. STOCK NUMBERS JOB-MATCHED TO YOUR NEEDS.

Ask you dealer for the Brightboy Catalog listing grains, textures, machine speeds, work suggestions. Write us if he cannot supply you or on any problem in which finishing is involved.

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

BRIGHTBOY INDUSTRIAL DIVISION • WELDON ROBERTS RUBBER CO.
95 North 13th Street Newark 7, N. J.
America's Pioneer Manufacturer of Rubber Bonded Abrasives

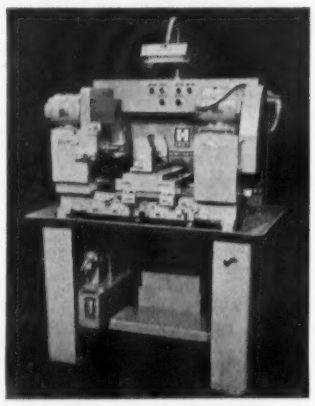
For more details circle NED-269 G7 on enclosed inquiry slip

CORONA TEST SET
evaluates electrical insulation

Nondestructive evaluation of electrical insulation in transformers, cables, capacitors and other electrical components is function of the model 2 corona test equipment. Corona is displayed as individual pulses on the screen of an oscilloscope with straight horizontal sweep synchronized with the test voltage. Equipment makes possible the grounding of one terminal of the component under test. Control cabinet and test transformer are available as separate units on casters for testing specimens with terminal capacitance up to 0-15 muf and impedance to ground of 20,000 ohms or more. Maximum power output is 20 kva at 20 kv 60 cps. Other models and ratings are available. Made by **James G. Biddle Co.**, Dept. 66-23, 1316 Arch St., Philadelphia 7, Pa.

For more details circle NED-271 G7 on enclosed inquiry slip

FINISHING MACHINES
"building block" units can be assembled for variety of operations



Standard interchangeable units or "building blocks" enable the model O Bore-Matic finishing machine to be set up as a dozen different basic machines. Hundreds of combinations in standard tooling and fixture equipment for straight and taper boring, straight and taper turning, facing, chamfering, grooving diameters and faces, and reaming are available for use singly or in combination. Special attachments permit contour or spherical boring or turning and slot milling.

Red Head boring heads make possible finishing of holes on centers as close as ¾-in. Spindles from ¾ to 3½ in. can be used in combination. Units ranging from single head with power operated table to four-head double-end setup with cross slide are offered. Tolerances of 0.0002-in. can be held. Top of table to spindle centerline capacity is 5 in. with table and 4 in. with cross slide. Distance between heads on a two-head unit is 5 in., maximum table travel is 9 in. and cross slide travel is 5 in. Made by **Heald Machine Co.**, Dept. N, Worcester 6, Mass.

For more details circle NED-272 G7 on enclosed inquiry slip

TAPER-LOCK SPROCKETS
—Single and Double Strand

NO REBORING—
NO MACHINING—
—NO WAITING!

Time-saving, cost-cutting features of Taper-Lock mounting are now available in both Single and Double Strand Sprockets. Newly announced Double Strand Sprocket sizes from No. 40-2 to 80-2, up to 102 teeth. Single Strand from No. 40 to No. 160, up to 112 teeth. Ready for the shaft off Distributors' shelves. Call your Transmissioneer, or write

DODGE MANUFACTURING CORPORATION
2100 Union Street, Mishawaka, Indiana

DODGE
of Mishawaka, Ind.

For more details circle NED-274 G7 on enclosed inquiry slip

HALLOWELL®
SOLID STEEL COLLARS

Size-marked for quick identification in 43 stock sizes

And these precision-machined solid steel collars stay put because they are held in place on the shaft by the famous UNBRAKO Self-Locking Socket Set Screw. Authorized industrial distributors carry complete stocks in sizes from ⅛" to 3" inclusive. Write for Bulletin 868. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

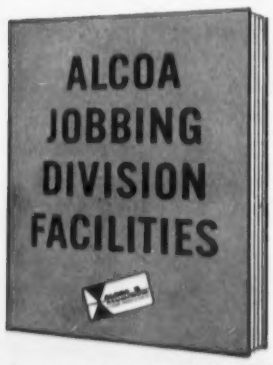
STANDARD PRESSED STEEL CO.
HALLOWELL POWER TRANSMISSION DIVISION SPS
JENKINTOWN PENNSYLVANIA

For more details circle NED-275 G7 on enclosed inquiry slip

We'll make it from ALUMINUM!

CONTAINERS
Also shipping drums, tote boxes, pallets, tanks. Process equipment. Welded tubing. Electronic cabinets. Farm gates. Floats. Phone booths.

Let Alcoa's Jobbing Division bid on your complex or long-run jobs in fabricated aluminum. We have the men, the machines, the technical know-how PLUS the help of Alcoa's giant research facilities. Let us solve your aluminum fabricating problems. Call your Alcoa sales office for more information on Alcoa's Jobbing Division.



FREE BOOK!
Describes equipment of Alcoa Jobbing Division. Shows kinds of jobs handled. 16 pages, easy reading, many pictures. Circle the Inquiry Card, or write: Aluminum Company of America, 1951-G Alcoa Bldg., Pittsburgh 19, Pa.

For more details circle NED-270 G7 on enclosed inquiry slip

LOUISVILLE STEP LADDERS

For more information, write:
LOUISVILLE LADDER COMPANY
Dept. N-7, 1101 West Oak St.,
Louisville, Ky.

For more details circle NED-273 G7 on enclosed inquiry slip

Widely used under dusty conditions in sandblast operations . . . for protection against fumes, smoke, etc.

Universally liked by men and management: *Extremely light* (5½ pounds) with nothing to tie or bind around the neck. * * * *Comfortable fit.* The light, flexible hood is evenly distributed over operator's head and shoulders. Complete freedom of head movements. * * * *Seamless rubber hood* — light and impervious to dust, but also extremely durable. * * * *Wide range of vision.* The glass window is tightly sealed against a soft rubber gasket. * * * *Utmost protection.* Workmen, when equipped with Purair Helmets, cannot inhale even the finest or most concentrated injurious dusts.

Approved by U. S. Bureau of Mines. Ask for Bulletin 97 and prices.

THE W. W. SLY MANUFACTURING CO.
4748 Train Avenue • Cleevland 1, Ohio
OFFICES IN PRINCIPAL CITIES

▲ For more details circle NED-276 G7 on enclosed inquiry slip ▲

The Air Control Valves you need are in this catalog

- Poppet-Type
- Rotary Disc
- Sliding Disc
- Speed Control

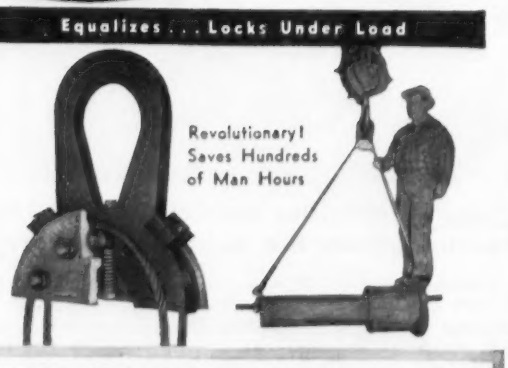
HANNIFIN

Hannifin Corporation, 527 S. Wolf Road, Des Plaines, Illinois
AIR and HYDRAULIC CYLINDERS • PRESSES • AIR CONTROL VALVES

▲ For more details circle NED-277 G7 on enclosed inquiry slip ▲

CALDWELL Hoisting Equipment **ADJUST-A-LEG SLING**

Equalizes . . . Locks Under Load



- **Lifts Unbalanced Loads Level**
- **Safe. Accurately Controls Loads**
- **Sizes 3/4-Ton to 50-Ton**

Balance point easily located by crane operator. Weight of load locks cables in V-grooves. One leg will carry up to 2/3 of sling capacity. Load can be hoisted at an angle if desired. Write for Bulletin E.

ATTRACTIVE TERRITORIES ARE AVAILABLE

THE CALDWELL COMPANY, INC.
1123 FOURTH AVE., ROCKFORD, ILL.

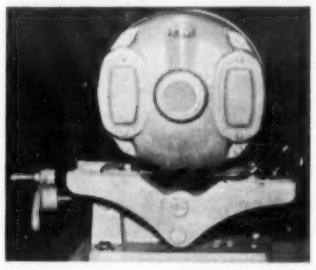
▲ For more details circle NED-278 G7 on enclosed inquiry slip ▲

CIGARETTE DOUSING STAND
deluxe model added to line

Deluxe model added to line of Sipco cigarette dunking stations is available in both standard and jumbo sizes. It has smooth, brightly polished canisters and fits well into decor of modern offices, waiting rooms, first aid rooms and lobbies. Large capacity unit is easy to clean. It contributes to safety and good housekeeping in plants. Made by **Standard Industrial Products Co.,** Dept. D, 920 N. Garfield Ave., Peoria, Ill.

▲ For more details circle NED-279 G7 on enclosed inquiry slip ▲

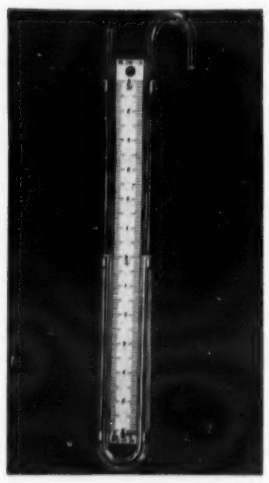
TILTING MOTOR BASE
simplifies making belt speed changes



Designed to facilitate belt changing and to compensate for belt tension while a machine is running, this tilting motor base is used with any variable speed pulley. The 5½ x 7½-in. base fits all fractional horsepower motors. Correct belt tension and alignment are maintained by a handwheel screw adjustment which changes angle of tilt. Made by **Lovejoy Flexible Coupling Co.,** Dept. NDC, 4891 W. Lake St., Chicago 44, Ill.

▲ For more details circle NED-280 G7 on enclosed inquiry slip ▲

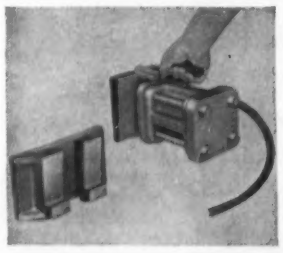
MANOMETERS
for light pressure and vacuum



Velocity and static pressures, leakage, fan and blower efficiency, resistance through filters, gas pressure and other measurements can be accurately made with the series 1225 manometer. Sizes of 6, 12 and 18 in. are available with straight or inverted U-connections for rubber tubing at the top. Double columns are made of heavy walled butyrate plastic tubing. Center mounted scale is vertically adjustable. Made by **F. W. Dwyer Mfg. Co.,** Dept. NED, Box 373, Michigan City, Ind.

▲ For more details circle NED-281 G7 on enclosed inquiry slip ▲

CLEVELAND'S NEW PORTABLE VIBRATOR



Lightweight

Well-Balanced

Having trouble with materials sticking in your portable bins or trucks? If so the Cleveland Type LSRRH Portable Vibrator is just what you've been looking for. This lightweight, unusually well-balanced portable is ideal for all equipment such as concrete forms, septic tanks or large pipe forms, that do not require a permanent vibrator installation.

The Cleveland Type LSRRH Portable Vibrator will develop 7000 to 8000 vibrations per minute at maximum speed, maintaining a free flow under all conditions. Its sturdy cast steel bracket holds the LSRRH securely in place, making it ideal for heavy duty use.

For more detailed information write for our illustrated catalog.

Remember, this new portable vibrator is just one of The Cleveland Vibrator Company's complete line of air and electric vibrators. There's a type and size vibrator for your every requirement.

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

▲ For more details circle NED-282 G7 on enclosed inquiry slip ▲

2½ TON CRANE ATTACHMENT
one of six accessories for versatile yard machine with exclusive 180° boom swing

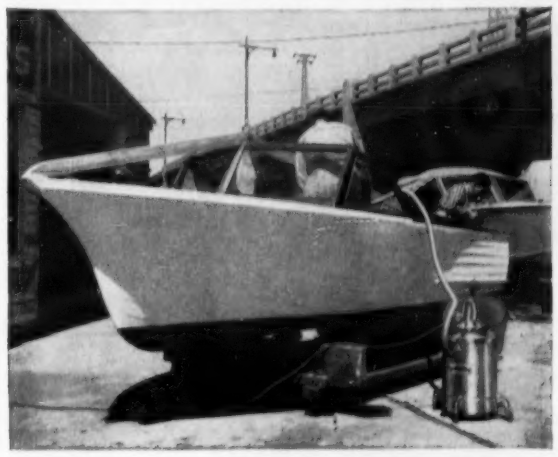
The exclusive 180° boom swing of Pettibone's Speed Swing, utilizing six interchangeable attachments, is one of the features that eliminates the need for

several special-purpose yard machines usually required for the work performed by versatile Speed Swing. The 2½ ton yard crane arm, material handling bucket, fork lift, car spotter attachment, dozer blade and snow bucket enable Speed Swing to do every conceivable yard job. Operation is effortless and worry-free, thanks to Torqmatic power-shift transmission, 2 or 4 wheel booster steering and planetary axles. Write for Bulletin P-264-NC.

THE NEW YARD SENSATION PETTIBONE SPEED SWING

Pettibone Mulliken Corp., 4700 W. Division St., Chicago 51, Ill. • SPaulding 2-9300

▲ For more details circle NED-283 G7 on enclosed inquiry slip ▲



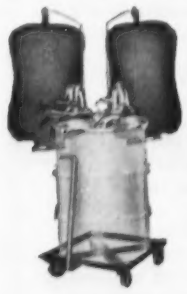
MORGAN, N. J.

TORNADO HITS ZUBACK BOAT WORKS...
and sweeps it clean of wood chips and sawdust

It's not a hurricane, but a Series 80 TORNADO vacuum which daily sweeps this boat works clean of the hour by hour accumulation of wood chips and sawdust.

As work progresses on each of these famous custom Jersey Sea-Skiffs, there is a Series 80 TORNADO vacuum on the job to inhale the wood particles that gather. Net result: Zuback craftsmen are always working on a clean job . . . and clean work is more efficient work.

If you have a problem with constant waste accumulation, be it wood, metal, glass, fibre or plastic, put a wet or dry pickup TORNADO vacuum (or two) on your production line and see for yourself how this powerful and versatile vacuum can make clean work more efficient work, and profitable, too!



And when you need powerful vacuum **PLUS** larger waste storage, it's the **TORNADO JUMBO CONVERSION** unit that gets the job done. The Jumbo Conversion plate fits all standard 55-gallon drums, and with two motor units, delivers up to 3 H.P. of suction. Four wheel dolly and pulling handle complete the unit.

Write for Bulletin No. 660

BREUER ELECTRIC MFG. CO.

5116 North Ravenswood Avenue • Chicago 40, Illinois

▲ For more details circle NED-284 G7 on enclosed inquiry slip ▲

Multi-purpose hydraulic power packages for all industry

NEW BLACKHAWK HOLL-O-RAMS

Sensational Blackhawk HOLL-O-RAM design harnesses hydraulic force for *straight-through pulling* or direct pushing!

and work-saving

HYDRAULIC PULLERS

Push-Puller in 3 capacities — no galled shafts, no damaged parts!

Double-Grip Puller in 3 capacities — grips tighter as load increases!

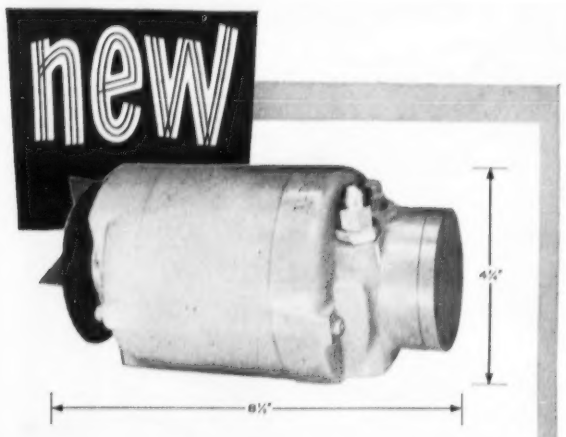
Triple-Grip Puller in 3 capacities — non-distorting, friction-free pulling!

Write for free Catalog No. HP-400

BLACKHAWK

BLACKHAWK MFG. CO., Dept. H-1567, Milwaukee 46, Wis.
"World's Largest Manufacturer of HYDRAULIC POWER TOOLS"

For more details circle NED-285 G7 on enclosed inquiry slip



POWERMITE

PUMP and MOTOR COMBINATION

- COMPACT
- LIGHTWEIGHT
- ECONOMICAL

This compact, new POWERMITE motor-pump combination, a Tuthill exclusive, was developed to meet the requirements of original equipment manufacturers with unusual space and weight limitations.

Motor and cooling blower have, in effect, been incorporated into the internal gear positive displacement rotary pump. The whole unit takes up no more space than a standard electric motor. A single shaft serves all units of the Powermite—and the elimination of couplings, other parts and labor permit substantial economies for OEM applications.

The pump section contains a built-in strainer, and, if desired, an adjustable relief valve. Powermite can be furnished with cooling blower, as illustrated, or supplied with a shaft extension for driving other accessories.

Powermite can be furnished in a wide variety of pump and motor combinations for use in hydraulic, oil burning, lubricating, and other services involving many different fluids. For example, the model illustrated has a capacity of 18 gph at 300 psi, and is driven by a 1/12 hp motor at a speed of 1750 rpm.

Manufacturers desiring to investigate the advantages of incorporating Powermites into their products are invited to submit detailed specifications. Or, if preferred, a Tuthill representative will call.

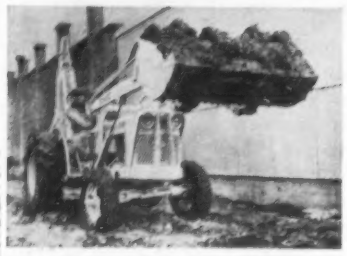
TUTHILL PUMP COMPANY

959 East 95th Street, Chicago 19, Ill.
Canadian Affiliate: Ingersoll Machine & Tool Company, Ltd., Ingersoll, Ontario, Canada

PUMPS FOR YOUR PURPOSE

For more details circle NED-286 G7 on enclosed inquiry slip

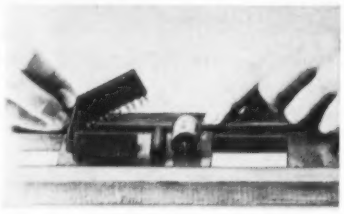
INDUSTRIAL TRACTOR has wrap-around steel subframe



Recessed headlights, steel bumper and radiator guard, fabricated steel wrap-around subframe which protects engine and transmission, and a one-piece drop forged steel axle are built into the model 320 industrial wheel tractor. It is powered by a high-torque 148-cu in. Case industrial engine. Power steering and a high speed shuttle transmission are also available, the latter making possible direction change without shifting gears. Seat can be reversed for operating the loader or backhoe. The ½-cu yd loader bucket has automatic power leveling, 26-degree break-out angle and 60-degree grading angle. Backhoe has 180-degree swing, 18 ft 7 in. reach and 12 ft 6 in. digging depth, plus telescoping hydraulic stabilizers. Made by **J. I. Case Co.**, Dept. NED, Racine, Wis.

For more details circle NED-287 G7 on enclosed inquiry slip

PLUG-IN UNITIZED CIRCUIT package combines wide range of capacitors and resistors



Designed for printed wiring applications, the PAC unitized assembly circuit allows insertion as a group of a wide range of capacitors and resistors. Each assembly is based on components of ⅛-in. diameter and ⅝-in. long. Mounting bases are laminated phenolic, and connections are made with bonded metallic conductors. Center-to-center spacing is 0.2-in.

Number of components in a package is limited by practical length of the strip. Components are mounted on clips, then soldered. Assembly is plastic coated and wax impregnated for protection against atmosphere. Available components include tubular ceramic capacitors in 10-148 mmf, 148-2400 mmf and 2401-5100 mmf groupings. Resistors range from 10 ohms to 20 megohms. Made by **Speer Carbon Co.**, Jeffers Electronics Div., Dept. JED, DuBois, Pa.

For more details circle NED-288 G7 on enclosed inquiry slip

Oxide Cutting Tools

Carborundum Co., Stupakoff Div.—Stupalox high strength oxide base cutting tools are subject of illustrated 12-page catalog 257. Technical descriptions and table of physical properties are included, along with dimensions and prices of throw-away inserts, solid inserts and unground blanks.

For more details circle NED-289 G7 on enclosed inquiry slip

You can't always see what makes a gearmotor outstanding. It's the small design details that make the difference—the special details that we believe make the new Reliance Gearmotor stand above the rest.

REDUCE SPEED

Find out the complete story for yourself—contact your Reliance Representative, or write for Bulletin E-2408.

E-1609-A

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Sales Offices and Distributors in Principal Cities

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with the Rocket

TAP SHARPENER

MODEL 50 for 2, 3, 4 flute taps collet capacity to 1-1/16"

MODEL 60 for 4, 5, 6 flute taps collet capacity to 2-1/4"

- low cost
- quick
- accurate
- push button controls
- no cams required

Write for demonstration and literature

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1816 Seventeenth Ave. Rockford, Ill.

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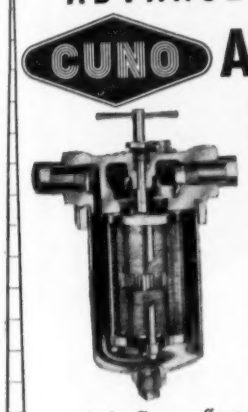
New Ideas...in

ADVANCED FILTRATION

CUNO AUTO-KLEAN



METAL-EDGE FILTERS

Permanent, all-metal filters combine small size with high flow rate and low pressure drop. Continuously self-cleaning without interrupting fluid flow . . . insure lowest per-gallon filtration cost. Spacings from .020" to 40 microns with single or two-stage filtration. A complete range of sizes for flow rates to 4000 gpm.

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Only Cuno offers you 5 distinct types of filters: EDGE-TYPE, WIRE-WOUND, SCREEN, FIBER CARTRIDGE AND POROUS METAL

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1707 SOUTH VINE STREET, MERIDEN, CONN.

Filtration Engineers in Principal Cities

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Snap-on provides specialized hand tool service across the board for industry

Production *Snap-on* offers a complete range of wrenches, sockets and specialized tools for product assembly.

Original Equipment *Snap-on* makes up custom-built tool kits which are included with new products shipped from the factory.

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Whatever your tool problem, *Snap-on* can render a specialized service. Branch offices and warehouses are located in 51 cities throughout the U.S. and Canada.

*Snap-on is the trademark of Snap-on Tools Corporation.

SNAP-ON TOOLS CORPORATION

8110-G 28th Ave., Kenosha, Wis.

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by FAIRFIELD

If you use gears in the products you make, we believe it will pay you, as it has others, to become acquainted with FAIRFIELD—the place where fine gears are produced to meet your specifications EFFICIENTLY, ECONOMICALLY! Fairfield's production facilities are unexcelled for making all kinds of accurate, automotive type gears such as are now finding wide use in all branches of industry: for tractors, trucks, and buses . . . for agricultural implements . . . for construction machinery . . . for machine tools. Ask for latest literature describing Fairfield's facilities.

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- High capacity precision ball bearings.
- Accommodates any misalignment.
- 31 shaft sizes, ½" through 2⁷⁄₁₆".
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Send for Catalog PBC for complete details.

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DIVISION OF GENERAL MOTORS • BRISTOL, CONN.

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SAWS ANY MATERIAL IN ANY DIRECTION . . . up or down . . . right or left . . . even in circles!

Fits any standard hacksaw or coping saw frame. Leaves clean, smooth edge without chipping or tearing. Adapter sets available for Delta 14" bandsaws and all Do-All machines.

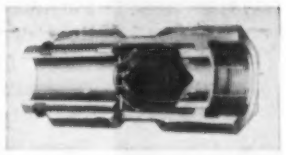
Hacksaw blades—29c each in lots of 10 to 49 blades. Prices on larger quantities and other items on request.

See your industrial supply jobber . . . or write to:

TYLER MANUFACTURING CO. 1005 W. Arbor Vitae Ave. Inglewood, Calif.

For more details circle NED-296 G7 on enclosed inquiry slip

BACK FLUSH CONTROL
various controlled flow rates



Controlled flow rate in one direction and uncontrolled flow rate with minimum pressure drop in the other direction are permitted with installation of this ¾-in. size unit. Developed for use in equipment requiring a back flushing operation, it is available in various controlled flow rates to 8 gpm. Parts are bronze, neoprene and nylon. Made by **Hays Mfg. Co.**, Dept. NED, 853 W. Twelfth St., Erie, Pa.

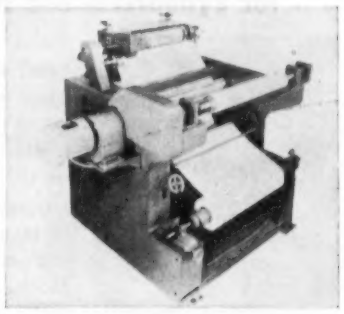
For more details circle NED-297 G7 on enclosed inquiry slip

STORAGE RACK
adjusts without bolting, unbolting

Over 800 different sizes and capacity variations can be made from five basic stocked parts of the Slide-n-lock storage rack. It is adjustable without bolting or unbolting. Stringers are quickly moved up or down a formed post and lock themselves in place. Post heights range from 84 to 132 in., widths from 46 to 120 in. and depths from 24 to 48 in. Several capacity ratings are offered. Made by **American Metal Products Co.**, Dept. S, 5971 Linsdale Ave., Detroit 4, Mich.

For more details circle NED-298 G7 on enclosed inquiry slip

PRINTING ATTACHMENT
for paper, film or foil rewinders



Single color flexographic printing unit is available for attachment to any paper, film or foil rewinding machine. It is made in widths to 72 in. and with printing repeats up to 24 in. Variable speed main drive of the parent machine powers the attachment, assuring perfect synchronization of the printing operation. Cellophane, polyethylene and other plastic films, aluminum foil and paper can be printed. Photo shows unit installed on Hobbs constant-tension rewind machine. Made by **Adolph Gottscho, Inc.**, 6C Terminal Rd., Hillside 5, N. J.

For more details circle NED-299 G7 on enclosed inquiry slip

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. . . consult **HOPE** first for the largest selection of types and sizes in the industry!

Thousands of standard sized electrical boxes by HOPE are used for junctions, terminals, panels, electrical and electronic apparatus mounting—with flanged, unflanged or hinged covers.

GALVANIZED CAST IRON: Weatherproof (NEMA III, IV, and V); Dustight (NEMA IX); J. I. C. (NEMA XII); Explosion Resisting (NEMA VII)

Also available in cast aluminum, brass and bronze

Conduit entrances can be bossed and 5-thread tapped, tapped only, or drilled. Special gaskets, mounting lugs, interior mounting buttons tapped blind—any or all to your specifications.

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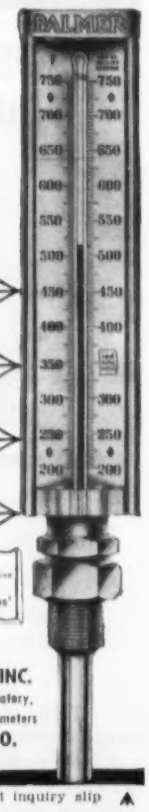
Today's Modern Industry Demands a Modern Thermometer

PALMER
RED-READING MERCURY THERMOMETERS



Red-Reading Mercury
Extruded Brass Case
Chrome Finish
Ranges −40 to 950°F or Equivalent in °C

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Ask for Bulletin No. 35

Find Your Palmer Representative in The 'Yellow Pages'

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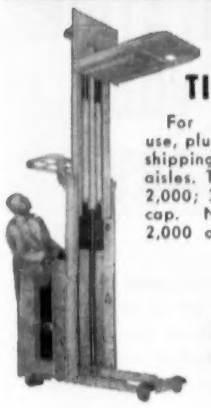
Mfrs of Industrial Laboratory, Recording and Dial Thermometers
Cincinnati 12, O.

For more details circle NED-301 G7 on enclosed inquiry slip

RAYMOND ELECTRIC TRUCKS



PLATFORM TIERING TRUCK

For production floor use, plus warehousing and shipping. Stacks in 5' aisles. Telescopic models: 2,000; 3,000 or 4,000 lb. cap. Non-telescopic: 2,000 or 4,000 lbs. cap.

STRADDLE TYPE TIERING TRUCK

Right-angle tiers from 6' wide aisles. Increases warehouse capacity up to 50%. Telescopic and Non-telescopic models. Capacities: 2,000; 3,000 or 4,000 lbs.

REACH-FORK TIERING TRUCK

The "Truck with Boarding House Reach". Operates in 6' aisles with existing racks and pallets. Forks reach out 24" to pick up or deposit load. Telescopic, Non-telescopic models. Cap: 2,000 or 3,000 lbs.

WALKIE

Operates on 4 auto batteries. Packs twice the power of ordinary walkies—12 volts for normal use, 24 volts for extra power. 3 speeds, exclusive safety control, 4,000 lb. capacity.

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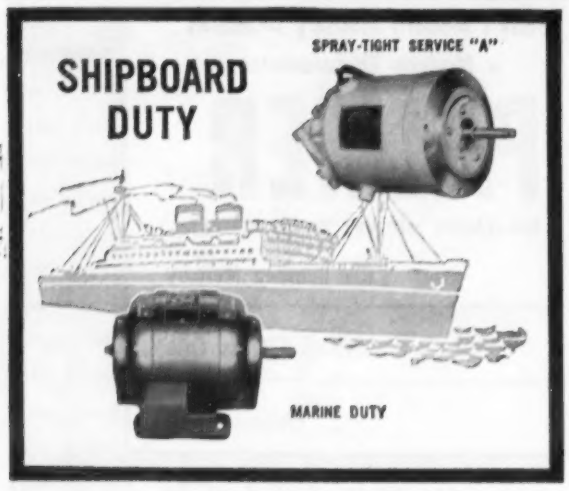
The RAYMOND CORPORATION
4129 Madison St., Greene, N.Y.
Please send Bulletins on RAYMOND Electric Trucks checked below:

☐ Straddle Type Tiering Truck ☐ Walkie Electric Truck
☐ Reach-Fork Tiering Truck ☐ Platform Tiering Truck

NAME TITLE
COMPANY
STREET
CITY STATE

For more details circle NED-302 G7 on enclosed inquiry slip



Peerless motors for marine service meet the critical specifications established in ABS, Mil-M-17413 (DC), Mil-M-17060-A (AC), AIEE 45 and U. S. Coast Guard. These motors, with standard or special mountings and features, serve aboard vessels throughout the world. Peerless will work with you to design the one motor that meets your needs best. Contact Peerless today.

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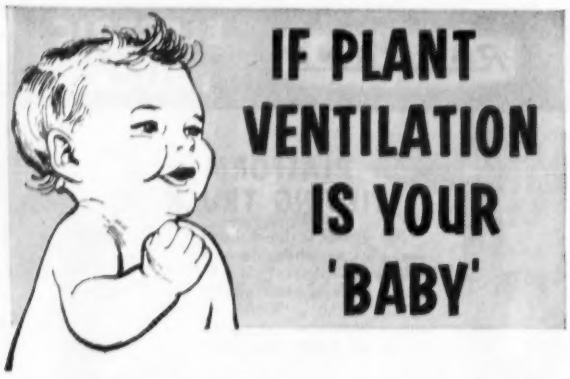
1506 W. MARKET ST. • WARREN, OHIO

For more details circle NED-303 G7 on enclosed inquiry slip



. . . you have a big job! Problems of fume, steam and smoke removal land in your lap. Some areas are too hot for peak work efficiency—fresh air has to be moved into every part of the plant—perhaps humidity control is important or paint booths have to be ventilated . . . You may have any number of different problems, but . . .

Power Line

CAN PROVIDE EVERYTHING . . . FROM SURVEY TO COMPLETE INSTALLATION!

For over 30 years we have been fan specialists. We can effectively assist in the design of a complete plant ventilating system or a spot cooling device. Furthermore, we are not limited in our recommendations because we have over 1000 models and sizes in our line to choose from . . . virtually every type of fan and ventilator that you could possibly use.

Use Power Line's Engineering Experience

Power Line engineers can provide practical solutions to any ventilating problem . . . We'll gladly make a survey and make our recommendations without cost or obligation—just call or write us!

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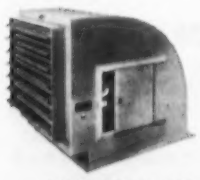


TYPES DRP & BRP

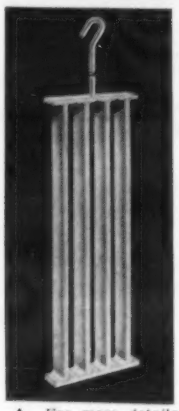
TYPES DRE & BRE

AD NO. 59-35A

Power Line FAN COMPANY
PLAINFIELD, NEW JERSEY

For more details circle NED-304 G7 on enclosed inquiry slip

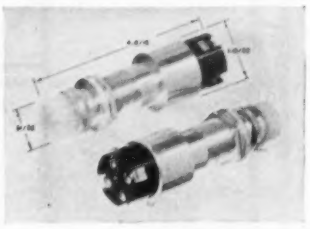
MAGNETIC PARTS CARRIER for overhead conveyor handling



Ferrous parts placed on magnetic tines of the Magne-Carrier are securely held for conveying through cleaning, rinsing, painting, drying and other process stations. Overhead conveyor parts handling is simplified and substantial savings in labor and equipment costs can be effected. Carriers are available with one to four tines and in varying lengths, depending on individual load requirements. Made by **Multi-finish Mfg. Co.,** Magnetool Div., Dept. NED, 26341 W. Eight Mile Rd., Detroit 19, Mich.

For more details circle NED-305 G7 on enclosed inquiry slip

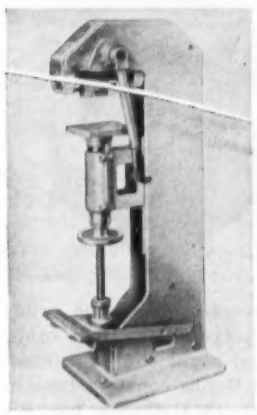
PUSHBUTTON SWITCH is 10-amp indicating type



Illuminated indicator pushbutton switch is snap-action momentary contact type rated 10 amp at 110 v and 5 amp at 220 v, resistance load. Switch circuit is isolated from indicating lamp circuit and is either normally-open or normally-closed. Cap assembly consists of ¾-in. white translucent jewel imprinted with any desired lettering and with a white, red, green, amber or blue filter underneath. Lamps used are either 6 or 10 w for 110 and 220-v operation, respectively. Made by **Marco Industries Co.,** Dept. NED, 207 S. Helena St., Anaheim, Calif.

For more details circle NED-306 G7 on enclosed inquiry slip

MARKING MACHINE for cylindrical and flat parts



Twist drills, hammers, pistons, bevel gears, hose fittings and shells are among types of cylindrical components that can be marked on the model EP 34 general purpose marking machine. It is also suited for marking certain types of flat stock. Hand operated machine is readily adjusted to accommodate various sizes and shapes of work to be marked. It uses interchangeable steel type or solid made-to-order dies. Made by **Pryor Marking Products,** Dept. DW, 434 S. Wabash Ave., Chicago 5, Ill.

For more details circle NED-307 G7 on enclosed inquiry slip

FEUTRON*
The Felts of the Future That Are Here Today!

Since they were first announced, early in 1956, the interest in FEUTRON Synthetic Felts has been tremendous.

The properties which characterize FEUTRON Felts are already being utilized in filtration . . . laminated plastics as reinforcing material . . . high temperature bearing seals . . . gasketing. But the uses are practically unlimited.

FEUTRON FACTS
1—Exceptional chemical resistance with thermal stability to 300F.
2—Non-hygroscopic and biologically stable.
3—Available (precision engineered to assure close density and thickness control) in Nylon and the various acetate, acrylic and polyester fibers.

Send today for Technical Bulletin, making request on your firm's letterhead.

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For more details circle NED-308 G7 on enclosed inquiry slip

For more details circle NED-309 G7 on enclosed inquiry slip

You can get the custom designs you want from a basic Skinner Solenoid Valve

In the small-size solenoid valve field, Skinner offers a wider variety of variations and optional features than any other manufacturer. Take, for example, the standard V5 model shown above in cutaway form. Its design is so flexible that the valve can be supplied for applications which would otherwise call for "specials." For complete information on Skinner's line of exceptionally leak-proof 2-, 3- and 4-way valves, contact a Skinner representative or write us at Dept. 437.

Skinner Solenoid Valves are distributed nationally

SKINNER ELECTRIC VALVE DIVISION NEW BRITAIN CONNECTICUT 165 EDGEWOOD AVENUE

For more details circle NED-310 G7 on enclosed inquiry slip

NEW JOINTING BULLETIN
for faster splicing of neoprene-jacketed cable

Step-by-step instructions — amply illustrated — pocket-size.

New bulletin simplifies jointing any voltage, any conductor size, shielded or nonshielded neoprene-jacketed cable. Nine illustrations in all, instead of usual single composite drawing. Clear, easy to follow. Fits conveniently in engineer's coat pocket, splicer's hip pocket. No cost or obligation. Write for copies to: Anaconda Wire & Cable Company, 25 Broadway, New York 4, N. Y.

ASK THE MAN FROM ANACONDA® FOR POWER CABLE

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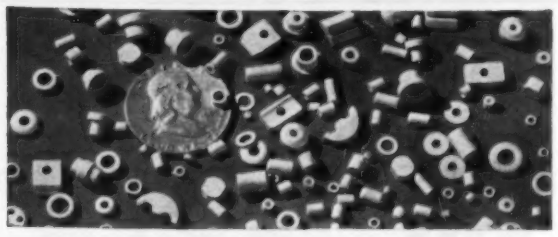

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The fabrication of precision parts of *industrial ceramics* is a specialized job . . . and STAR specializes in it!

There is practically no limit to the variety of shapes we can turn out to meet your simple or intricate specifications precisely . . . economically.

More than 25 automatic presses, operating 24 hours a day are available to turn out ferrules, grommets, eyelets, rings, cups, shells, and millions of other close tolerance parts made from Star Ceramics. This means lower cost to you . . . faster service to meet busy production schedules.

Write for complete details, a generous assortment of samples *and our NEW 20-page catalog.*

* This includes the half dollar (and more) in production savings!

the STAR porcelain company 50 Muirhead Avenue, Trenton 9, N.J.

California Representatives:
Edwin E. Starr, 4101 Rhodes Ave., North Hollywood, Calif. STanley 7-5879.
Thermo Materials Inc., 44 Encino Avenue, Palo Alto, Calif. DAvenport 3-7991.

For more details circle NED-312 G7 on enclosed inquiry slip

The sooner you put Cadillac Quik-Vac to work — the sooner you'll start cutting cleaning costs

Model 14 has a 3-in-1 Swivel Hose-coupler.* For vacuuming, it connects hose to dirt container or power unit intake . . . for blowing, to the power unit outlet. *Another Cadillac Quik-Vac exclusive that saves time, trouble and money.*

In just seconds, the *2-speed Power Unit can be demounted* for use as a hand-type Blower-Suction Cleaner.

THE *Rugged* MODEL 14 CLEMENTS Cadillac® QUIK-VAC

. . . has a new teammate . . . the versatile MODEL 21. This Cadillac Quik-Vac meets the requirements of maintenance women as well as maintenance men. It has super-power, *extra* large capacity, and its wide floor nozzle has a "floating brush" that adjusts itself automatically to any type of floor covering. It's as sturdy as an oak, yet moves about with ease of a ballerina.

WE'LL BE GLAD TO SEND FULL INFORMATION ABOUT THESE CLEMENTS PRODUCTS
- Cadillac Quik-Vac Model 14
- Cadillac Quik-Vac Model 21
- 2-speed portable Blower-Suction cleaner and 3 other job-rated models
- Hot- and Cold-Air Blower
- Furnace Blowers
- Gas Blowtorch
- Huge assortment of attachments for handling scores of cleaning and production jobs

WRITE US FOR COMPLETE INFORMATION and name of our nearest supply dealer

*Patent applied for

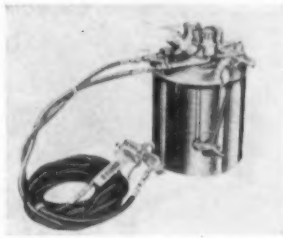
write Industrial Vacuum Cleaner Division
CLEMENTS MFG. CO., 6627 S. Narragansett Ave., Chicago 38, Ill.

Specialists in the manufacture of vacuum cleaning equipment for home, business and industry

Several territories are open for sales representation by verified factory reps

For more details circle NED-313 G7 on enclosed inquiry slip

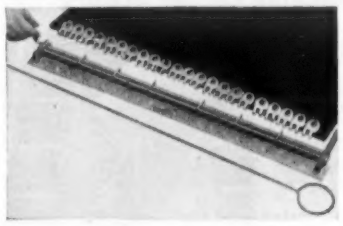
PAINT SPRAY PUMP
works from original 1 to 5 gal pails



Completely self-contained Redi-Spray paint spray unit, which operates on same principle as an auto fuel pump, delivers paint from original 1 to 5-gallon shipping pails, without pressurizing the container. The air-powered pump mixes and pumps all new multicolor, standard and vinyl paints, primers and sealers. It supplies fluid instantly when spray gun is opened, and shuts off when gun is closed. Color changing can be done in seconds. Made by **Gray Co.**, 1043 Sibley St. N.E., Minneapolis 13, Minn.

For more details circle NED-314 G7 on enclosed inquiry slip

ALIGNING HOLDER
speeds belt fastener application



Application of No. 500 and 500X Flexco hinged conveyor belt fasteners is simplified with this aligning holder. Cam and alignment pins hold fasteners in proper alignment while nuts are being tightened. Holder is removed by turning cam pin 90 degrees and pulling out alignment pin. One size accommodates belts up to 36 in. wide. Made by **Flexible Steel Lacing Co.**, 4607 Lexington St., Chicago 44, Ill.

For more details circle NED-315 G7 on enclosed inquiry slip

HOT WATER DISPENSER
attaches to water cooler

Utilizing existing basin and drain facilities, the Add-on hot water dispenser converts pressure type water coolers to combination cold-hot water dispensers. Up to 80 cups of hot water per hour are delivered at a temperature from 195 to 200° F, suitable for making instant coffee, tea, hot chocolate, soup or bouillon. Attached to back or side of cooler with four screws, it requires a connection from the existing water supply line. Electric heater, adjustable thermostat, 6 ft of cord and a pushbutton type gooseneck filler are included. Made by **McIntire Co.**, Dept. C, Okner Pkwy., Livingston 11, N. J.

For more details circle NED-316 G7 on enclosed inquiry slip

in every case

stepped up drive efficiency— less maintenance

with Wood's complete drives

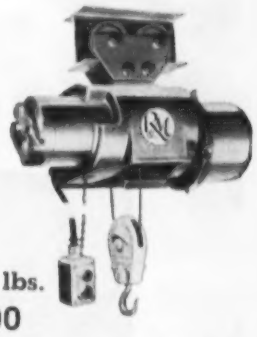
SHEAVES • V-BELTS • COMPLETE DRIVES • All Sizes • Quick Delivery • Contact Your Nearest WOOD'S Distributor • Write for Bulletin #199.

T. B. WOODS SONS CO.
CHAMBERSBURG, PA.
CAMBRIDGE, MASS. • NEWARK, N. J. • DALLAS, TEXAS • CLEVELAND, O.

For more details circle NED-317 G7 on enclosed inquiry slip

R&M HOISTS • CRANES • WINCHES

GET MORE "BIG HOIST" FEATURES in Robbins & Myers "J" HOISTS

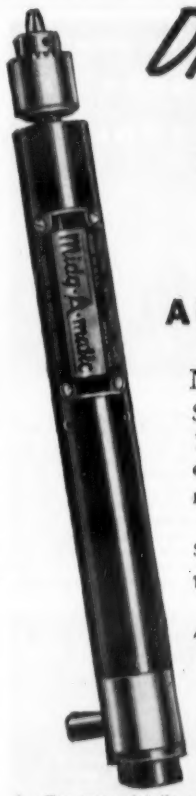


- capacities 500 to 4000 lbs.
- prices start at $295.00

"Big Hoist" features of the "J" include: Heat treated gears, precision ground shafts, sealed or splash lubricated ball bearings, plow steel cable, rugged limit switch, ball bearing sheave block, forged steel hook, shoe-type motor brake, Weston-type load brake, push-button control, hook, lug, or plain trolley mounting. Speed choice 15, 19, or 30 fpm, lift choice 10 or 20 feet. Write for Bulletin 851-B.

take it up with ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO | BRANTFORD, ONTARIO

For more details circle NED-318 G7 on enclosed inquiry slip



DRILL SMALL HOLES!

AUTOMATICALLY!

NEW MIDG-A-MATIC Self-Feed Drill. 1" diameter. 10-3/16" long. For *low cost* drilling. Use singly or in multiples.

WRITE for full technical details. See your Aro Distributor.

THE ARO EQUIPMENT CORPORATION
GENERAL OFFICES—BRYAN, OHIO
Plants at Bryan and Cleveland, Ohio
Aro of California, 3141 S. Grand Ave., Los Angeles 7, Calif. • Aro Equipment of Canada, Ltd., Toronto 15, Ontario
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ARO® AIR TOOLS
Also . . . AIR HOISTS . . . LUBRICATING EQUIPMENT . . . AIRCRAFT PRODUCTS . . . GREASE FITTINGS . . .

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Kodak Signet 40 Camera—makes sharp, clear pictures.

Simple but capable camera for record pictures, 35mm slides

With this precise yet easy-to-use camera you can make excellent *record pictures* (black-and-white or color) of safety hazards, job setups, breakage claims, research projects, maintenance problems. And you can shoot top-quality slides for training lectures, sales talks, or technical discussions.

The Kodak Signet 40 Camera gives you a fine *f*/3.5 lens, and shutter speeds from 1/5 to 1/400 second—yet it's simple to use. It's small enough to slip in your pocket, carry along on field trips. You'll like the brilliant viewfinder coupled with rangefinder in a single window. Price—only $69,* including flasholder and two reflectors (for both popular types of midget bulbs).

FREE BOOKLET gives you full details. Write for it.

*List price, including Federal Tax. Subject to change without notice.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

For more details circle NED-320 G7 on enclosed inquiry slip

Now...

MOLDED RUBBER PARTS TO YOUR SPECIFICATIONS AT NEW LOW COST!

For mass-production economies . . . plus faster delivery and consistent quality . . . Stalwart has installed batteries of *new high-speed automatic molding presses.* Production times and costs on high volume orders have been cut to new minimums. That's why you can save more on your molded rubber parts when you specify "Stalwart".

STALWART RUBBER COMPANY

Manufacturing plants in Bedford, Ohio and Jasper, Georgia. MAIN OFFICES: 151 NORTHFIELD ROAD, BEDFORD, OHIO.

For the complete Stalwart story, write for CATALOG 56-SR-3.

7575-SR

For more details circle NED-321 G7 on enclosed inquiry slip

IN STOCK! AVAILABLE NOW!

54 *Different* SETS OF BOKUM BORING TOOLS

You'll find it convenient to have Bokum Boring Tools in sets — containing just the sizes you most frequently use. There are 54 different assortments of tools in stock at all times—packaged in neat, sturdy wooden cases. Combinations can be made up to answer any specific production requirement. Tools are available in both carbide-tipped and high speed steel. Write for catalogs illustrating this extra convenience.

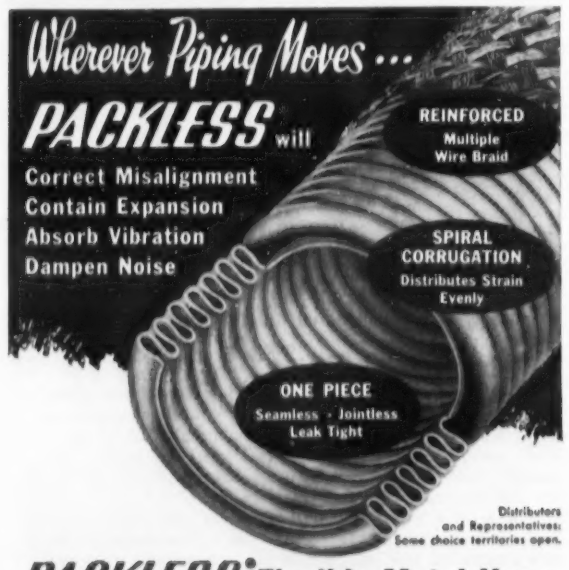
BOKUM TOOL CO. INC. 14775 Wildemere Ave. Detroit 38, Mich.

For more details circle NED-322 G7 on enclosed inquiry slip

Wherever Piping Moves...

PACKLESS will

Correct Misalignment
Contain Expansion
Absorb Vibration
Dampen Noise



Distributors and Representatives: Some choice territories open.

PACKLESS® Flexible Metal Hose

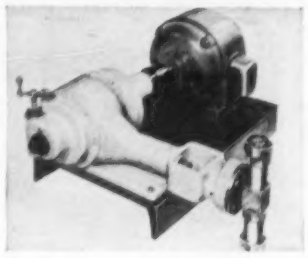
PRESSURES — to 15,000 PSI
MATERIALS — BRONZE, CARBON STEEL, STAINLESS
SIZES — 5/32" to 10" I.D.
FITTINGS — AS REQUIRED

Consulting and design engineering offered at no extra cost. Send for general bulletins or call us direct. Your inquiries will receive prompt attention.

PACKLESS METAL HOSE INC.
730-39 South Columbus Ave., Mt. Vernon, N.Y.

For more details circle NED-323 G7 on enclosed inquiry slip

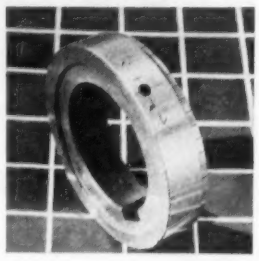
PROPORTIONING PUMP
feeds against pressure to 16,500 psi



Capable of handling wide range of chemicals and other liquids, this heavy duty proportioning pump is made in various sizes which are adjustable in output from 0.003 gpm to 796 gph. Stroke length can be adjusted to any length from 0 to maximum while pump is running. Repeatable volumetric accuracy is within 1 per cent. Three types of control are available, with pump construction to suit fluid handled. Pressures range to 16,500 psi. Made by **Capacitrol Pump Co.,** 1431 Fairmount Ave., Philadelphia 30, Pa.

For more details circle NED-324 G7 on enclosed inquiry slip

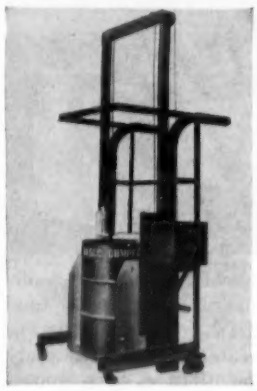
ADJUSTABLE SPACING COLLARS
for milling machine cutter arbors



Accurate spacing of side milling cutters in gang milling and other multiple milling machine setups is assured with these micrometer adjustable spacing collars. Sizes range from 5/8 to 3 in. for all standard cutter arbors. Marked outer barrel is adjusted with spanner wrench against the 0.001-in. graduations of the inner barrel. Adjustment of 0.00025-in. can be made by visual calibration. Made by **Dayton Rogers Mfg. Co.,** 2822 Thirteenth Ave. S., Minneapolis 7, Minn.

For more details circle NED-325 G7 on enclosed inquiry slip

HAND POWERED DUMPER
for free-flowing materials



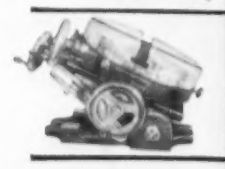
Free-flowing materials in loads up to 600 lb can be lifted and dumped with the Junior hand-powered dumper. Attachments for handling boxes, drums, bags and other containers are easily installed on the fork-type arms. Dumping height ranges up to 7 ft. Unit has swivel and stationary casters for moving about plant. It can be quickly adapted to motor power if necessary. A ½-hp electric motor drive is optionally available and can be installed without extensive modification. Made by **Essex Conveyors, Inc.,** Dept. NED, 165 Franklin Ave., Nutley 10, N. J.

For more details circle NED-326 G7 on enclosed inquiry slip

PALMGREN ROTARY and INDEXING TABLES to speed up production on milling machines or drill presses

USED IN ALL INDUSTRIES... *Everywhere*

No. 83 Rotary Table. Two Cross Feed Slides and Rotary Feed converts your Drill Press for vertical milling. 8" Table Diameter. $79.95



No. 84 Tilting Indexing and Rotary Table. Combines Rotary Feed and Two Cross Feeds on one unit, plus a 90° Angle Tilting Feature. 8" Table Diameter. $139.50

No. 86 Rotary and Indexing Table. Graduated Rotary Feed. New improvements can lower costs in every metal or woodworking shop. 8" Table Diameter. $69.95

No. 96 (not illustrated). 6" Table Diameter, only $59.95

There are 64 different models and types of Palmgren vises, rotary tables, milling attachments and other machine tool accessories, comprising the most complete line of vises and tables available anywhere, with jaw sizes from 1½" to 8".

SEND FOR CATALOG 205 showing complete line, details and prices.

CHICAGO TOOL AND ENGINEERING CO.
8372 South Chicago Avenue · Chicago 17, Illinois

For more details circle NED-327 G7 on enclosed inquiry slip

Commander

MULTI-ANGLE DRILL UNIT

- Compact—only 2¾" wide x 10¾" long
- Drills on close centers
- Low cost
- Simple, fast set-up

PRICE ONLY $125.00

MULTI-ANGLE Drill unit is a complete, compact drill unit that easily adapts to special drilling problems where tooling space is limited. Ideal for angle drilling. Adapts to many power sources—flexible shaft, air or electric motors. Hydraulic spindle actuation—up to 4" stroke.

Write for complete details and name of nearby Commander Distributor

Commander MFG. CO.
4220 W. KINZIE ST., CHICAGO 24, ILLINOIS

For more details circle NED-328 G7 on enclosed inquiry slip

why the swing is to TOLEDO PRODUCTION SEATING

Series 8150 Adjustable Posture Chair in use.

- Increases production
- Lifts morale
- Reduces errors caused by fatigue
- Meets "use requirements" at each station

The Toledo Metal Furniture Company offers you the only complete line of comfortable, safe, durable PRODUCTION SEATING. Choose from a wide range of features*, developed from Toledo's 60 years experience, to get exactly the right chairs for your operations.

***FEATURES . . .** HEIGHTS (10 basic heights, range: 14" to 32"): Quick-adjustable—Adjustable—Fixed. FEET: 5 kinds to choose. SEATS: Swivel—Non-swivel—Steel — Wood — Cushioned. BACKREST: Straight — Springback — Adjustable.

Series 146 Fixed Height Stool

Free! Valuable PRODUCTION SEATING information. Write for Bulletin 905-A.

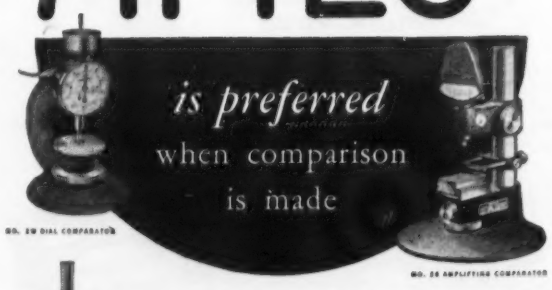
Series 5306 Quick Adjustable Posture Chair

Other Series Available

The Toledo Metal Furniture Co.
1020 SOUTH HASTINGS STREET • TOLEDO 7, OHIO

For more details circle NED-329 G7 on enclosed inquiry slip

AMEs



For fast, accurate measurements, Ames Dial Comparators are the choice of quality control men everywhere. You get definite, impersonal readings directly from the dial. There's no guesswork or figuring.

Special comparators are available for measuring resilient materials such as rubber, paper, etc., and for measuring non-yielding materials such as sheet metal, glass and plastic. Write for complete details.

Representatives in principal cities

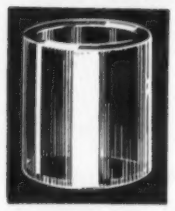
B.C. AMES CO.
34 Ames Street, Waltham 54, Mass.

MANUFACTURERS OF MICROMETER DIAL GAUGES • MICROMETER DIAL INDICATORS

For more details circle NED-330 G7 on enclosed inquiry slip

SWIFT

carries a complete stock of



GAUGE GLASS and CYLINDERS

Need Gauge Glass or Cylinders in a hurry? Then write, wire or phone Swift for immediate delivery.

We have a complete stock of Pyrex Tubular Gauge Glass and Cylinders on hand for chemical, pharmaceutical or industrial applications. Supplied in any length or finish from 2 mm. O.D. to 7" O.D.

SWIFT *Glass Division*
SWIFT LUBRICATOR COMPANY, INC.
5 Glass St., Elmira, N.Y.

For more details circle NED-331 G7 on enclosed inquiry slip

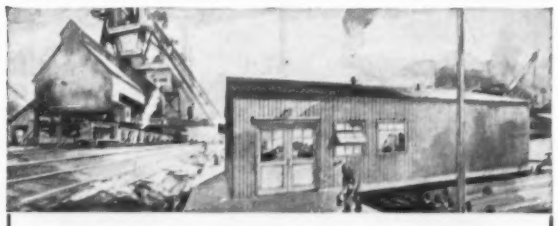
All at once they're laced!

with Clipper HOOKS and LACERS

You can lace belts up to 12 inches wide in one operation with Clipper Belt Hooks and Lacers. For complete information on this time-saving method, send today for your free copy of Bulletin No. 157.

Clipper BELT LACER COMPANY
976 Front Ave., N. W., Grand Rapids, Michigan
Ask your Industrial Distributor for Clipper Products

For more details circle NED-332 G7 on enclosed inquiry slip



New Truscon Steel "Budget Buildings" Offer Top Utility at Low, Low Cost

Here's the latest design by the pioneer of prefabricated steel buildings. Now available from "off-the-shelf" stocks of pre-engineered materials. Shipped to your site as a package—all windows, doors, roofing, siding, hardware, included. Engineered for fast on-site erection. Widths 32 to 48 feet (in 4'0" increments)...heights 12 and 14 feet... lengths as long as you want them. Truscon "Budget Buildings" are fire-resistant, movable, styled for community acceptance. Write for latest bulletin.

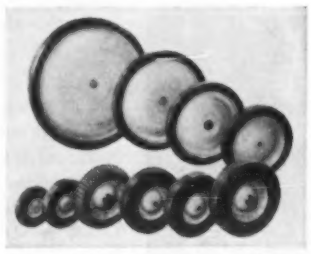
TRUSCON STEEL DIVISION
REPUBLIC STEEL
1096 Albert Street, Youngstown 1, Ohio

TRUSCON MARK OF MERIT PRODUCTS

C-4117-A

For more details circle NED-333 G7 on enclosed inquiry slip

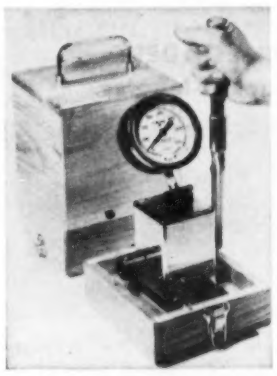
REPLACEMENT WHEELS for hand trucks, carts, racks, bins



Types and sizes to meet light and heavy-duty industrial wheel replacement needs, such as for hand trucks, shop carts, portable racks and bins, are afforded by this Allied line of wheels. Constructed of steel with through-hub steel ball bearings, wheels range from 6 to 26 in. in diameter, in a wide selection of load capacities. Axle bushings are offered to reduce axle bores from ¾ to ⅝ in., ¾ to ½ in. and ⅝ to ½ in. Made by **Allied Wheel Products, Inc.**, 29-N Broadway, Toledo 4, O.

For more details circle NED-334 G7 on enclosed inquiry slip

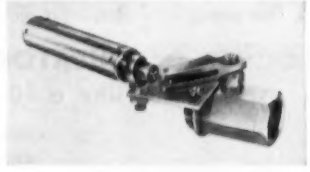
TORQUE WRENCH CALIBRATOR tests to 1 per cent of full scale



Portable, self - contained hydraulic torque wrench calibrator tests accurately to within 1 per cent of full scale reading. Wrench is put in a coupling and turned, creating a hydraulic pressure within the unit which is accurately measured by a hydraulic gage with readings in torque. Three sizes, each with two ranges, have torque readings of 0 to 200 oz-in. and lb-in.; 0 to 60 and 0 to 150 lb-ft; and 0 to 600 and 0 to 2000 lb-ft. Made by **Skidmore-Wilhelm Mfg. Co.**, Dept. N, 442 S. Green Rd., Cleveland 21, O.

For more details circle NED-335 G7 on enclosed inquiry slip

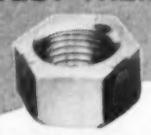
BALL VALVE OPERATORS air or hydraulically operated



Two-way pneumatic or hydraulic remote and sequence operation of Double Seal ¼ to 4-in. ball valves is possible with line of air or hydraulic operators. Disconnection permits manual valve operation in case of power failure. Operators can be used with standard stainless steel, bronze, carbon steel, aluminum or polyvinyl chloride ball valves from high vacuum to pressures of 2000 psi. Operating speeds range from ½-second for a ¼-in. valve to ¾-second for 1¼ to 4-in. valves, but can be adjusted upward or downward. Made by **Jamesbury Corp.**, Dept. NE, 45 New St., Worcester, Mass.

For more details circle NED-336 G7 on enclosed inquiry slip

TEST THEM *free!*



SHAKEPROOF® Lokuts®

Prevailing torque type Lock Nuts

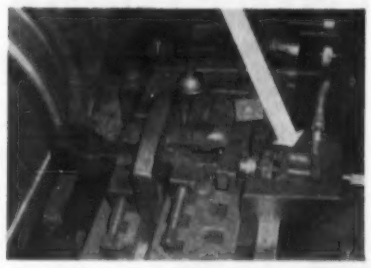
Lock any place on screw or bolt. Triple-sheared LOKUTS provide friction locking action, yet are designed for free starting. Unaffected by temperature changes, bolt stretch or work pressures, LOKUTS are available in Coarse or Fine Thread Series, Class 2-B tolerance, sizes #6 to 1/2".

Send today for free testing samples.

SHAKEPROOF
"Fastening Headquarters"®
DIVISION OF ILLINOIS TOOL WORKS
St. Charles Road, Elgin, Illinois

For more details circle NED-337 G7 on enclosed inquiry slip

Here's How OTC Rams Help Boost Steel Mill Production 50%



OTC Power-Twin hydraulic ram maintains even pressure of knurling tool against roll.

Steel mills use these huge rolls to draw thick billets down to thin bars and sheets. Toothlike knurls on the rolls force the billets through. Periodically rolls must be turned down and reknurled.

By controlling cutting and knurling operations with OTC rams, this steel mill* boosted roll life 50 per cent—now knurls are deeper, sharper, more even. Cutting and knurling is done up to 70 per cent faster. Changeover cost (saved many times over) was $400 including OTC rams.

Besides Power-Twin rams, OTC offers a complete line of production and maintenance tools to save time, money. For information write

OTC OWATONNA TOOL COMPANY
436 Cedar Street . . . Owatonna, Minn.
*mill name on request

For more details circle NED-338 G7 on enclosed inquiry slip

with a

DI-ACRO*ROD PARTER

Make several thousand burr-free cuts per hour in bar stock

Combination shearing-breaking action parts bar stock without burring and minimum distortion. Handles up to ⅝" round bar stock—square, rectangular, and hex shaped bar stock can be parted when machine is equipped with special die heads.

Material range is from hot rolled bar stock to stainless steel and other high alloy materials. The harder the material is the better it parts.

Long lasting die heads can be reversed before resharpening—can be sharpened many times. Standard cutting heads in No. 2 and power models have 10 graduated holes from 1/16" to ⅛"; No. 1 Model has eleven holes. Optional die heads for parting scaly hot rolled bar stock *at no extra charge.*

Speed-Matic Gauge, an accessory on power model, enables machine to part off several thousand short pieces an hour. *Send us samples for test cutting or consult the Yellow Pages of your phone book for the nearest Di-Acro distributor.*

Hand operated model also handles up to ⅝" rods.

Di-Acro Power Parter with stock stand and Speed-Matic Gauge.

This ¼" stainless steel bar stock has been "parted" in a Di-Acro Rod Parter. Shiny edges show where rod was sheared, then fractured or "parted off." Will clear hole its own diameter.

di-acro PRECISION METALWORKING MACHINES

*pronounced die-ack-ro

O'NEIL-IRWIN MFG. CO.
354 8th Avenue—Lake City, Minn.

For more details circle NED-339 G7 on enclosed inquiry slip

POWERFUL NEW-PLUNGER CLEARS CLOGGED TOILETS

in a jiffy!

Clear messy, stuffed toilets Cut maintenance costs with

'TOILAFLEX'

Toilet ALL ANGLE Plunger

Ordinary plungers don't seat properly. They permit compressed air and water to splash back. Thus you not only have a mess, but you lose the very pressure you need to clear the obstruction.

With "TOILAFLEX", expressly designed for toilets, no air or water can escape. The full pressure plows through the clogging mass and swishes it down.

- Accordion-action design to flex at any angle
- Double-size cup blasts double pressure, aimed directly at obstruction
- Tapered suction-grooved tail gives air-tight fit

Get a "TOILAFLEX" for your home too. Positive insurance against stuffed toilet.

$2.65 Fully Guaranteed

Order from your Supplier of Hardware or Janitor Supplies

THE STEVENS-BURT CO., NEW BRUNSWICK, N. J.

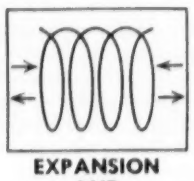
A Division of The Water Master Company

For more details circle NED-340 G7 on enclosed inquiry slip

Titeflex flexible METAL HOSE

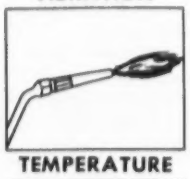
SOLVES PROBLEMS OF . . .

***Write today for Free new* CATALOG**



EXPANSION AND CONTRACTION

VIBRATION



TEMPERATURE

CORROSION

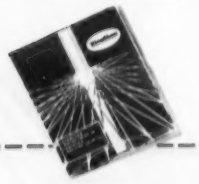
PRESSURE

Titeflex Flexible Metal Hose

Titeflex Flexible Metal Hose is made from brass, monel, bronze, carbon, and stainless steel for conveying all types of organic and volatile liquids (as well as gases) within a broad temperature and pressure range for *every* type of industrial application.

If you work with "problem chemicals" or are confronted with any of the problems depicted in this column, be sure to investigate Titeflex Flexible Metal Hose. Design and engineering assistance without obligation.

This hose is now widely used for
1. Fire Extinguishers
2. Air Control Lines
3. Cleaning Vats
4. Air Conditioning Units
5. Milling Machines
6. Hydraulic Presses
7. Steam Lines
8. Many others

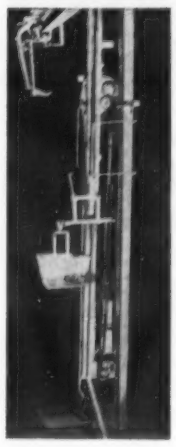


TITEFLEX, INC.
Industrial Products Div.
507 Hendee Street, Springfield, Mass.
Please mail new Titeflex Catalog No. 200. No obligation!

Name_____
Title_____
Company_____
Address_____
City_____ Zone____ State_____

For more details circle NED-341 G7 on enclosed inquiry slip

OVERHEAD CONVEYOR SYSTEM automatically dispatches loads



Only the elevator of the Trans-Free overhead conveyor system requires any floor space, the remainder of the system using overhead areas. Basic operating principle is mechanical transfer of material from a main conveyor line to "free" storage or intermediate production lines. Load is transferred to and from floor lever by illustrated elevator. System is built of standard overhead I-beam track, uses regulation load carriers and dispatches materials manually or automatically from any point to any other point. Processing and storage loops can be provided at any desired location. Made by **Sparton Corp.,** Allied Steel & Conveyors Div., Dept. TF, 17333 Healy Ave., Detroit 12, Mich.

For more details circle NED-342 G7 on enclosed inquiry slip

HYDRAULIC TRACTOR LOADERS have automatic bucket leveler

"Fifth cylinder" automatic hydraulic bucket leveling device is featured on the new Chief hydraulic loaders. Mounted on left frame support, device allows operator complete freedom for tractor operations. Unit's 12-gpm hydraulic system lifts 1750 lb to full height in 6 seconds and lowers it in 3 seconds. Chromed high-carbon steel rods and double-acting cylinders are used throughout. Models are available to fit Case 300 and 310, Oliver 55 and Super 55, IHC 300 and 350, Minneapolis-Moline 335 and 445, Ford 640 and 860, Ferguson 40, Massey-Harris 50 and other tractors. Made by **Henderson Mfg. Co.,** Dept. NED, Cedar Rapids, Iowa.

For more details circle NED-343 G7 on enclosed inquiry slip

POCKET CALCULATOR performs like a 10-in. slide rule

Commercial and technical calculations can be performed with this 3-in. diameter Controller calculator which has the performance of a 10-in. slide rule. The controller can be used to multiply, divide, or figure exchange rates, currency, cost of merchandise, fuel consumption, speeds, percentages, interest and compound interest, margins, counter offers, circle calculations, areas, volumes, squares, cubes, medial section, fractions to decimals and inches to centimeters or vice versa. Unit is made of aluminum and is unaffected by climate. Cost of $7.95 includes vinyl carrying case and 12-page instruction booklet. The German-made calculator is distributed by **Silver Bells, Ltd.,** Dept. NED, 600 Sixteenth St., Oakland, Calif.

For more details circle NED-344 G7 on enclosed inquiry slip

MINIATURE ELECTRICAL CONNECTORS for high-altitude flight operations

These miniature, high-temperature electrical connectors, offered in three series, are designed for high-altitude flight operations. Staggered construction gives long creepage path between pins despite small connector dimensions. Body is anodized aluminum, and each pin of the mated connector is surrounded by Teflon. Shown left to right are series 100 square-flange receptacle, series 300 cord receptacle, series 200 panel-mount receptacle and series 400 plug. Available with 1, 3, 7 or 19 pins, connectors are rated 1800 v ac at sea level and 800 v ac at 70,000 ft. They can withstand shock of 200 g and show no resonance to 2000 cps. Temperature range is −67 to 400° F. Made by **Consolidated Electrodynamics Corp.,** Glendale Div., 740 Salem, Glendale, Calif.

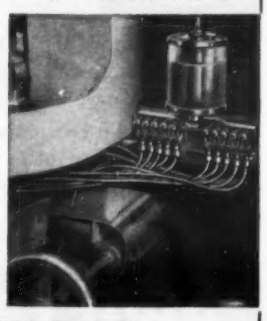
For more details circle NED-345 G7 on enclosed inquiry slip

Lubricate Up to . . . 20 . . . Bearings With TRICO MULTIPLE FEED OILERS

- **Manual Or Solenoid Control**
- **Pyrex Glass Or Lucite Plastic Reservoirs**
- **1 Pt., 1 Qt. and 2½ Qt. Capacities.**

Automatically feed a measured quantity of oil by gravity to multiple bearing points. No intricate mechanical parts to clog or stick. Simple needle-valve adjustments eliminate dangers of guesswork. Transparent bottle shows instantly when refilling is necessary. Easily installed. Low in cost.

SEND FOR FREE BUL. NO. 33



TRICO Multiple Oiler On Surface Grinder At Martindale Electric Company, Cleveland, Ohio

Ten Bearings are lubricated from one *central* point safely and economically. Great savings of costly labor and lubricants are reported over former method of daily "trust-to-luck" hand oiling.

Photo—Courtesy Martindale Electric Co.

TRICO FUSE MFG. CO. MILWAUKEE, WIS.

For more details circle NED-346 G7 on enclosed inquiry slip

JELLIFF ALLOY 800

Serving Industry for 76 Years.

Where space is at a premium and performance is a "must," these outstanding qualities of Jelliff Alloy 800 will assure that your products conform to the tightest specs.

RESISTANCE WIRE
for miniaturized precision-instrument components

the ideal resistance wire for . . .

fixed and variable resistors of high ohmage—resistance boxes and bridges—voltmeter and wattmeter multipliers and other miniature wire-wound units.

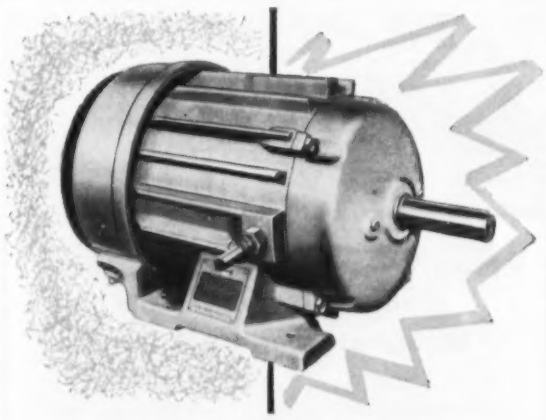
High resistivity, 800 ohms/cmf — Low Temperature Coefficient, ±20 ppm per °C — Non-Magnetic — Highly Stable Electrically and Mechanically — Diameters from 0.0007" to 0.0056" — Bare, enameled or oxidized or insulated with silk, Nylon or cotton. Easily solderable and highly ductile for winding purposes.

We also produce a complete line of Standard Resistance Alloys. Ask us about Alloys A, C, 45, 180, 90, 60, and 30.

For Complete Data Address Department 11

THE C. O. JELLIFF MANUFACTURING CORP.
Southport • Connecticut • USA

For more details circle NED-347 G7 on enclosed inquiry slip



New Louis Allis "Clean-Flo" Lint-Free Textile Motor

Louis Allis now introduces the modern textile-motor concept; totally enclosed, self-cleaned with high-capacity fan — for lint-free operation.

Many features make this motor specially suited for textile industry use. See them in bulletin 1850, "Louis Allis Textile Motor." The Louis Allis Co., 436 E. Stewart Street, Milwaukee 1, Wisconsin.

LOUIS ALLIS

YE-106

For more details circle NED-348 G7 on enclosed inquiry slip

CHEMLON ...the Packing Solution to Non-Flammable Hydraulic Fluids

John Crane Chemlon® Piston Cup, U-Cup and Flange Packings are the answer to handling *all* types of hydraulic fluids. Molded from chemically inert Teflon*, they give positive sealing and long-lasting performance not possible with leather, fabric-reinforced or similar packings.

Heat will not cause these packings to shrink away from the cylinder walls or rod. They will not harden, shrink, swell or in any way disintegrate under higher temperatures often encountered in hydraulic service. Operating range is from —94°F. to +350°F.

Available in a wide range of sizes or fabricated to your individual specifications.

***Send for bulletin.* Crane Packing Company, 6411 Oakton Street, Morton Grove, Illinois (Chicago Suburb).**
In Canada: Crane Packing Co., Ltd., Hamilton, Ontario

*DuPont Trademark

John Crane — MECHANICAL PACKINGS · SHAFT SEALS · TEFLON PRODUCTS · LAPPING MACHINES · THREAD COMPOUNDS

CRANE PACKING COMPANY

▲ For more details circle NED-349 G7 on enclosed inquiry slip ▲

Lightnin® Mixers

guaranteed to give you exact mixing results

You're sure of getting the right mixing pattern for your operations, when you buy a LIGHTNIN.

All LIGHTNIN Mixers are guaranteed to do the job for which they are recommended, or your money refunded. The guarantee is your assurance of the results you want.

PORTABLE MIXERS turn any open vessel into an efficient, low-cost mixing unit. Adjustable for slow-rolling or rapid double-action mixing or vortexing. Thirty models, ⅛ to 3 HP; electric or air driven; direct or gear drive. Send for Catalog B-108.

TOP ENTERING or bottom entering units for larger-horsepower mixing jobs. Series "E" LIGHTNINs can be installed on open or closed tanks. Turbine, paddle and propeller types. Hundreds of power-speed combinations. Sizes 1 to 500 HP. Send for Catalog B-102.

SIDE ENTERING mixers can mix, blend and suspend solids in tanks up to 6 million gallons. Stuffing box easily repacked with tank full — optional rotary seal eliminates repacking. Sizes 1 to 25 HP. Send for Catalog B-104.

FREE CATALOGS. You can get any of the catalogs mentioned above by checking the reader service slip. If you want information on the full line — or on how to get free engineering help — ask for Condensed Catalog B-109.

MIXING EQUIPMENT Co., Inc.
165-g Mt. Read Blvd., Rochester 11, N.Y.

In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 10, Ont.

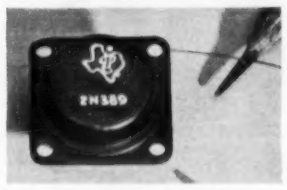
▲ For more details circle NED-350 G7 on enclosed inquiry slip ▲

TAPE RECORDER-REPRODUCER
functions unattended for 24 hours

Log of voice circuits is maintained by this compact magnetic tape recorder-reproducer which is capable of recording continuously, unattended, without tape change, for 24 hours. Tape is on 3¾-in. diameter, 2-in. wide reels and records at 2½ ipm. Compact unit is suited for fixed installations or portable use. Tape is calibrated in minutes from 0000 to 1455 for precise location of a particular segment. Accessory magnetic tape demagnetizer erases tape reels in 15 seconds for reuse. Inputs are telephone, line and microphone and outputs are speaker and headset. Price is $950. Made by **SoundScriber Corp.**, 146 Munson St., New Haven 9, Conn.

▲ For more details circle NED-351 G7 on enclosed inquiry slip ▲

SILICON TRANSISTOR
gaseous diffused-junction type



Rated power dissipation of the 2N389 gaseous diffused-junction silicon transistor is 37.5 w at 25° C and 15 w at 100° C. Suited for high power transistorized servo and audio output systems used under high temperature conditions, the transistor has a 2-amp collector current and a maximum saturation resistance of 6 ohms. When used in aircraft applications, a 60-v collector-to-emitter rating allows power to be taken directly from 28-v power supplies. Operating range is from −65 to 150° C. Made by **Texas Instruments Inc.**, 6001 Lemmon Ave., Dallas 9, Tex.

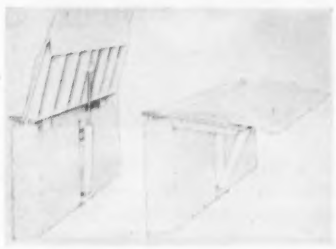
▲ For more details circle NED-352 G7 on enclosed inquiry slip ▲

SCREWDRIVER-NUTSETTER TOOLS
improved line has doubled power

EB series of Silver Line portable electric screwdriver-nutsetter tools has double the power of the UL series tools they replace. Weight and size reductions range up to 25 per cent. Tools are in the No. 10 screw or nut capacity class and are available with bonnet toggle or lever switches, polished aluminum housings and speeds of 500, 1000, 1500 and 2500 rpm. Attachment types include adjustable double slip and Uni-Tork clutches for precision torque assembly work. Straight or right angle attachments are offered with double slip clutch types. Also featured are a machine-wound armature mounted on oversize ball bearings for both forward and reverse action, centrifugal fan, reaction type brush holders and suspension hook. Made by **Thor Power Tool Co.**, Dept. EB, Prudential Plaza, Chicago 1, Ill.

▲ For more details circle NED-353 G7 on enclosed inquiry slip ▲

MOBILE DOCK RAMP
rides on rails along dock



In 30 seconds after one truck is unloaded in one position, the Rail - O - Matic mobile dock ramp can be rolled on its own rail to unload another truck at another position along the dock. Ramp installs on any platform, requires no pit and can be stored out of the way. Platform has 24-in. adjustment range to accommodate any truck bed height. Unit rides on single dock-side rail which can be mounted to existing or new dock. Foot control raises or lowers hydraulic ramp into any position. Nonskid approach plate carries all weight of traffic crossing the unit. Power unit has self-contained motor and pump. Made by **Wayne Pump Co.**, 118 Tecumseh St., Ft. Wayne, Ind.

▲ For more details circle NED-354 G7 on enclosed inquiry slip ▲

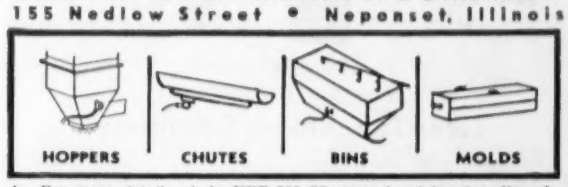
VIBROLATOR®

the strong silent type VIBRATOR

FOR MOVEMENT OF WET OR DRY MATERIAL

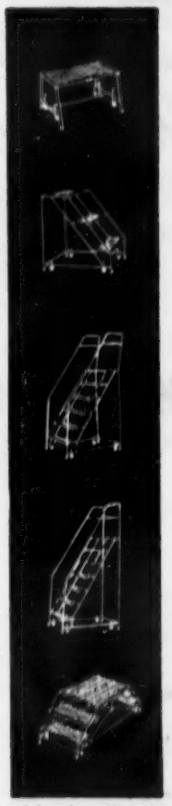
Only one moving part does the job — a rolling ball driven by compressed air or steam. Needs no oil or filters. The VIBROLATOR moves materials down chutes, out of bins and hoppers, actuates screens, brings up entrained air in wet plaster, concrete and granulars. Priced from $9 to $88 in malleable iron, (non-ferrous in some sizes), from "pocket-watch" size to the 10 lb. DV-51. Write for complete catalog today.

MARTIN ENGINEERING COMPANY
155 Nedlow Street • Neponset, Illinois



▲ For more details circle NED-355 G7 on enclosed inquiry slip ▲

NOW... for work levels up to 15 feet high

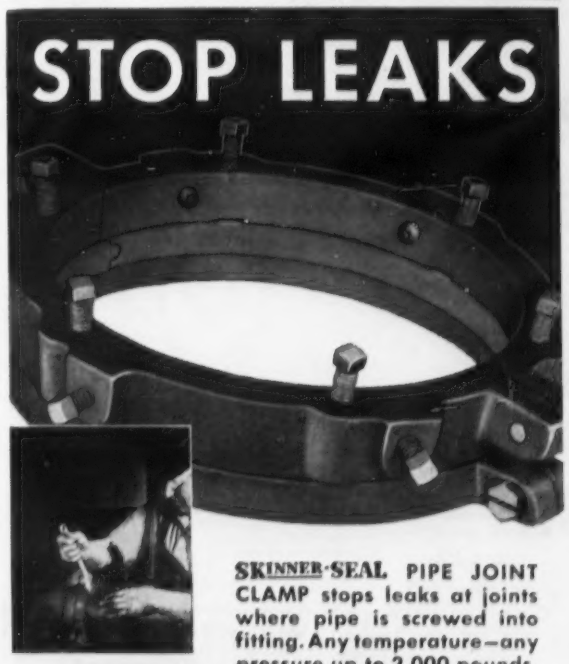


Ballymore all-welded-steel Safety-Step Ladders available from one to twelve steps. Over 100 models to choose from. Portable — they roll. Up to 9 steps, they automatically lock to floor when you step on — 9 steps and over, they have step-on brake casters at front. Send for catalog. The Ballymore Company, West Chester 3, Pa.

Ballymore — **Safety-Step LADDERS**

▲ For more details circle NED-356 G7 on enclosed inquiry slip ▲

STOP LEAKS



SKINNER-SEAL PIPE JOINT CLAMP stops leaks at joints where pipe is screwed into fitting. Any temperature—any pressure up to 2,000 pounds. Saves the cost of tearing out and renewing leaky fittings. Prevents shutdowns. Order from your local industrial distributor!

M. B. SKINNER CO., South Bend 21, Ind. — Established 1898

▲ For more details circle NED-357 G7 on enclosed inquiry slip ▲

TWEETEN Marker
THE PENCIL OF 1000 USES

DEPENDABLE DURABLE

Marks on any surface

Wet • Dry • Frozen

Soft • Hard • Rough

Heavy duty marking pencil with screw type feed. Neat and clean—always ready for instant use.

Extra long 3½" refills available in black, yellow, red, blue, green and white.

The choice of Industry.

Order from your Supplier

TweeTen Fibre Company

2029 W. Fulton St. Chicago 11, Ill.

For more details circle NED-358 G7 on enclosed inquiry slip

5 sure ways
to cut production costs

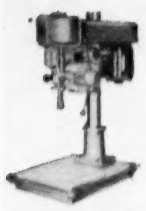
with WALKER-TURNER

"LIGHT-HEAVYWEIGHT"

MACHINE TOOLS

Combining rugged construction, large capacity, and unusual versatility, Walker-Turner "Light-Heavyweights" are ideal for a wide range of precision tooling and heavy-duty production operations. Frequently they can be used to replace or supplement larger, expensive machines. They are readily portable, yet retain the accuracy and sturdiness of permanently-installed equipment.

Ask your W-T distributor for details. He's listed under "Tools" in your telephone directory.



1. USE WALKER-TURNER DRILL PRESSES

These 20" and 15" drill presses can't be equalled for fast, accurate production drilling. Bench, floor, and production models—single or multiple spindle.

2. USE WALKER-TURNER BAND SAWS

The W-T 16" variable speed band saw adjusts instantly, while running, to correct cutting speed for any metal. 14" models also available.

4. USE WALKER-TURNER GRINDERS

Designed for your most exacting grinding operations. Line includes 7" tool grinder, 6" bench grinder, versatile surface grinder, and 6" carbide tool grinder.

3. USE NEW WALKER-TURNER RADIAL DRILLS

Provide all the features of larger machine tools costing several times as much. 24 models with 4¼" or 6" spindle travel—unequalled in price or dollar value.

5. USE WALKER-TURNER CUT-OFF MACHINES

This W-T cuts fast, true and clean. Can be used with abrasive cutting wheels or saw blades for fast cutting-off of metals, plastics or wood.

Mail coupon for details on the complete Walker-Turner line!

WALKER-TURNER
Division of Rockwell Manufacturing Co.
Dept. WG45, 400 N. Lexington Ave.
Pittsburgh 8, Pa.

☐ Please send name of my W-T distributor.
☐ Please send literature.

Name_____
Address_____
City_____ Zone____ State_____

For more details circle NED-359 G7 on enclosed inquiry slip

WIRE MARKERS
of self-adhering aluminum foil

Furnished on quick-release dispensing cards precut for easy handling, Speedy Marx self-adhering aluminum foil wire markers can be applied instantly without tools. Thermosetting adhesive retains its bonding action up to 350° F. Symbols or markings can be specified. After imprinting, a transparent plastic coating is applied to protect symbols against abrasion, water or dirt. Markers are available in 1½-in. size for wires over ¼-in. OD and in ¾-in. size for wires under ¼-in. OD. Special sizes, shapes and colors can also be furnished. Made by **North Shore Nameplate, Inc.**, Dept. NED, 214-27 Northern Blvd., Bayside 61, N. Y.

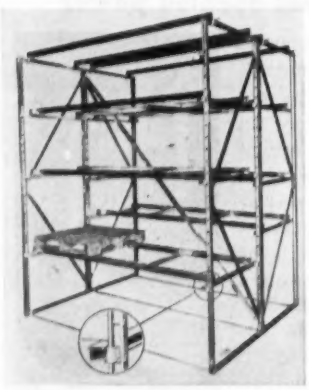
For more details circle NED-360 G7 on enclosed inquiry slip

BALL BEARING
has solid inner and outer raceways

Full complement of balls is contained in the Unibal ball bearing which has solid, unbroken inner and outer raceways, without insertion groove or retaining ring. Bearing has deep burnished ball grooves and integral labyrinth seals on one or both sides where required. Construction provides high radial and axial load capacities. Single row, double row and flanged types are available with closely-held bore and outside diameters and controlled radial and axial play. Narrow widths and small diameters can be furnished. Made by **Heim Co.**, 64 Sanford St., Fairfield, Conn.

For more details circle NED-361 G7 on enclosed inquiry slip

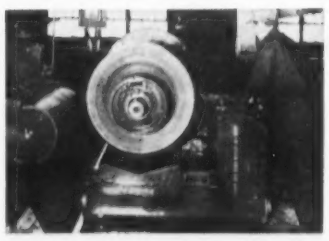
ADJUSTABLE RACK
for pallet, skid and bulk storage



Readily adjusted shelf height is feature of this Easy-Rack adjustable storage rack. Shelves are relocated or removed without tools and are securely supported by heavy pins in the uprights. Unitized construction and simple bolt fasteners speed erection. Zinc coated steel members resist corrosion. Choice is offered of interchangeable pallet, skid or bulk storage shelves. Single and back-to-back designs are available from **M-H Standard Corp.**, 513 Communipaw Ave., Jersey City 4, N. J.

For more details circle NED-362 G7 on enclosed inquiry slip

COIL LIFTERS
all models operate on tracks; for 5000 to 20,000-lb coil loads



V-shaped deck on line of hydraulic and electro-hydraulic coil lifters facilitates handling and lifting of coils of varying sizes. All models have four flanged wheels for track operation. Coils up to 48 in. OD and 30 in. wide are handled by the 4000-lb capacity model, equipped with a double-acting hand pump to lift up to 18 in. Foot pedal-actuated model can lift 5000-lb coils with same dimensions to height of 9 in.

Hydraulic handlift coil lifter has an 8000-lb capacity and uses its pulling handle, when engaged, as the lifting device. Coils weighing 10,000 lb and measuring 48 in. OD by 30 in. wide are handled by an electro-hydraulic drive and lift model. Lift is 12 in. Also equipped with power lift and travel is the 20,000-lb capacity unit with electro-hydraulic traction drive. It lifts to 12 in. and handles 50-in. wide coils of any diameter. Made by **Lewis-Shepard Products, Inc.**, Dept. R-10, 125 Walnut St., Watertown 72, Mass.

For more details circle NED-363 G7 on enclosed inquiry slip

FAST SERVICE on SMALL TUBING

STRAIGHT • FORMED • MACHINED —FERROUS AND NON-FERROUS IN O.D.'s DOWN TO .010 IN.

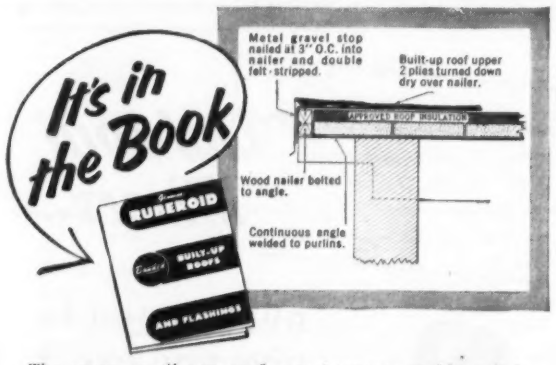
If you've had trouble getting fast delivery on small tubing or small tubing components, try Uniform Tubes. We can turn out your order for 1000 or 2000 ft. of ⅛ in. o.d. or smaller overnight if necessary, with immediate delivery to local air terminals. (This is close tolerance work, too— ±.00025 in. if specified.) Not that we don't handle larger sizes, longer runs. We do, regularly, in o.d.'s up to ⅝ in.

Among the many alloys drawn by Uniform are aluminum, copper, brass, phosphor bronze, nickel silver, silver, low carbon steel, 300 series stainless, A Nickel, Monel, Inconel. Write, phone, wire for fast service.

Copy of our new catalog sent free on request

UNIFORM TUBES, INC.
1200 Level Road, Collegeville 2, Pa., HUxley 9-7276
Wellesley, Mass., WE 5-1874 Chicago, Ill., SH 3-9033
Buffalo, N.Y., SPring 8481
St. Paul, Minn., MI 6-7485 Pasadena, Cal., RY 1-9534

For more details circle NED-364 G7 on enclosed inquiry slip



The answer to all your roofing maintenance problems is in Ruberoid's Built-Up Roofing Specification Book. There's a complete specification with detail drawings, like the one above, to meet every condition—Smooth Surfaced Asbestos, Coal Tar Pitch or Special Bitumen with gravel or slag surfacing, and smooth or gravel-and-slag surfaced asphalt.

Because Ruberoid makes *every type* of built-up roof, Ruberoid roofers are not prejudiced in favor of any one type. Because Ruberoid has been a leader in the field for 60 years, you can depend on the right materials and the right specification through Ruberoid Approved Roofers.

Give your roof a thorough check-up now, *and write for Ruberoid's free Built-Up Roofing Specification Book. The Ruberoid Co., 500 Fifth Avenue, New York 36, N. Y.*

The RUBEROID Co.

ASPHALT AND ASBESTOS BUILDING MATERIALS

For more details circle NED-365 G7 on enclosed inquiry slip

FHP motors . . . engineered especially for your product

The new RAE M-20 or M-100 Motor. Ventilated or enclosed. Designed for quality but not expensive. Strong, rugged casting. Ball or sleeve bearings. Can be used with any of RAE's gear units.
Winding —
M-20 — Universal or Shunt
M-100—Permanent Magnet (DC Shunt)
Voltage — 6 to 220 AC/DC or DC Shunt
Max. H. P. — 1/30 Continuous
Weight — Approx. 2 lbs.

RAE motors

RAE engineers are recognized specialists in solving difficult FHP motor applications. By careful analysis and testing of your product, they can save you time and money in selecting the right motor.

RAE offers outstanding service and quality in a large variety of motors. Available in voltages up to 250, and up to 1/6 H.P. (higher for intermittent duty) with many gearhead motor combinations.

Find out how RAE motors can *improve your product* and *reduce costs* as they are doing for other leading manufacturers.

***Send for the "RAE" Engineering Data Sheet. It will help you supply the data necessary for recommendations and prices.**

Rae MOTOR CORP.
2009 Kewaunee Street
Racine, Wisconsin

AC/DC Universal • DC Shunt Wound • DC Series Wound • Gear Reduction Motors • Governor Controlled Motors • Motors for Rheostat Control • Motors for Electronic Control • Permanent Magnet Motors and Gearmotors.

For more details circle NED-366 G7 on enclosed inquiry slip

A happy ending to those excessive wire-rope costs

Electroline

WIRE ROPE FITTINGS

Tremendous holding strength and a simple design that reduces rope wear at the commonest point of failure, make Electroline Fittings the first choice of veteran wire rope users.

Easy Application—an Electroline fitting goes on in a jiffy; no molten metal, just ordinary tools.

Lasting Grip—they hang on "for keeps".

Rope Lasts Longer—vibration damped, rope fatigue reduced.

Fittings Reusable—when wire rope is "worn out"—use the fittings again and again, indefinitely.

That's the simple story of how to gain substantial savings. Next step—write for the Electroline catalog with full information.

Electroline COMPANY

4121 SOUTH LASALLE STREET • CHICAGO 9, ILLINOIS

In Canada: Powerlite Devices, Ltd., Toronto

For more details circle NED-367 G7 on enclosed inquiry slip

PRECISION MERCURIAL MANOMETER

Accuracy . . . .01 inches Hg.

Float Indicator . . . no meniscus errors

Temperature Compensation . . . . no corrections

Write today for Publication No. TP-29-A

A-95

WALLACE & TIERNAN

ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS

Belleville 9, New Jersey

Represented in Principal Cities

In Canada, Wallace & Tiernan Products, Ltd.—Toronto

For more details circle NED-368 G7 on enclosed inquiry slip

PREFACE TO GREATER SALES

Profitable idea for display purposes and for guards or grilles on stoves, heaters, radios, coin-operated phonographs, etc., is *Minimesh*—the *small-mesh expanded metal.*

Decorative . . . it gives your product a clean, modern look that will step up sales. Functional . . . the openings permit free passage of sound, light and air.

Free descriptive folder 510-EM, could well be your first step to greater sales. Write today.

PENN METAL COMPANY, INC.

General Sales Office: 40 Central St., Boston 9, Mass.

Plant: Parkersburg, W. Va. PM-106

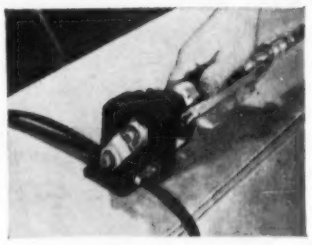
For more details circle NED-369 G7 on enclosed inquiry slip

ELECTRIC CORD REEL
feeds current to mobile equipment

Six models have been added to the Budgit line of cord reels to increase the horsepower capacity range from a previous 1 hp to a present 7½ hp. Wire sizes handled include a choice of No. 14 and 16 wire, with cord lengths up to 50 ft on certain models. Track up to twice the cord length can be served by mounting reel in center of runway. Swinging guide rotates through 290 degrees, and four rollers guide cord in any direction. Rewinding is automatic in this easily mounted unit. Made by **Manning, Maxwell & Moore, Inc.,** Shaw-Box Crane & Hoist Div., Park St. & Broadway, Muskegon, Mich.

For more details circle NED-370 G7 on enclosed inquiry slip

STEEL STRAPPING TOOL
sizes for four strapping widths



Weighing less than 4 lb, the PNE Stretcher steel strapping tool has unlimited take-up and is available for ⅜, ½, ⅝ and ¾-in. strap widths. Tool can be adjusted to all gages in the width it handles. Pneumatically controlled tension minimizes operator fatigue. Eight feet of air hose and coupling are supplied. Made by **Sharon Steel Corp.,** Brainard Steel Div., 3100 Griswold St., Warren, O.

For more details circle NED-371 G7 on enclosed inquiry slip

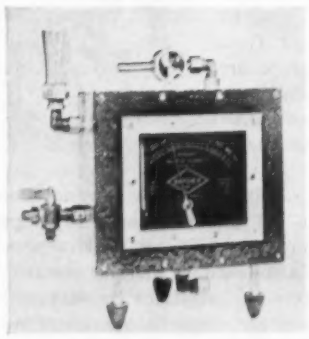
INDUSTRIAL TELEVISION
line includes cameras, controls, monitors and other components

Self - contained TC-100 camera and 3-lb TC-200 camera with separate control unit are included in line of industrial television equipment, suited for a variety of applications. Latter camera measures 10 x 3 x 3½ in. Also included are 8 and 17-in. video monitors, lenses, turrets, drive motors, remote camera controls, switching units, interlace adapter kit, voltage regulator, pan-tilt control and mount, tripods, power cords, connectors and handset for sound communications.

Synchronization generator and distribution amplifier, and cooled, dust and explosionproof housings are available. Basic TC-100 vidicon camera produces bright pictures with light levels as low as 10 or 15 ft-c and usable pictures with even less light. Made by **Allen B. Du Mont Laboratories, Inc.,** 760 Bloomfield Ave., Clifton, N. J.

For more details circle NED-372 G7 on enclosed inquiry slip

REMOTE HUMIDITY INDICATOR
draws air sample from any area



Humidity of closed areas in laboratories, offices or plants is accurately monitored by this remote humidity indicator. A vacuum pump draws air from any area through line to instrument at any required location. Readings, accurate within 1½ per cent, are indicated on large legible dial. Unit compensates for temperature variations, and thermometer verifies temperature equilibrium. Price is $175. Made by **Serdex, Inc.,** 81 Cambridge St., Boston 14, Mass.

For more details circle NED-373 G7 on enclosed inquiry slip

NEED GEARS?

Eliminate 'high-cost specials' by standardizing on AMERICAN STOCK GEARS

Investigate and you'll probably find that instead of having to go to the added time and expense of ordering special gears, that your needs can be filled from the American line.

American is a complete stock gear line. It includes brass, bronze, steel, semi-steel, cast iron, and non-metallic gears in a range of 48 to 3 diametral pitch. Available from your nearby distributor of American Stock Gears.

Ask for FREE copy of American Stock Gear Catalog No. 360 containing detailed information and engineering data.

AMERICAN STOCK GEAR division

Perfection Gear Co., Harvey, Illinois

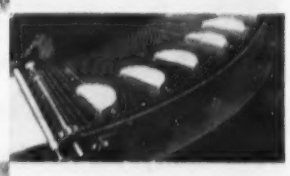
For more details circle NED-374 G7 on enclosed inquiry slip

HERE'S WHAT WENDWAY CAN DO FOR YOU!

Wendway can be your "silent partner" by conveying any light products weighing 20 lbs. or less, swiftly and silently from one operation to the next. Wendway conveying systems are completely sanitary . . . safe for operators, too! Wendway will carry your products overhead, through walls, upstairs or down—to any place you want them. Wendway will eliminate wasted manpower, unnecessary handling and boost production all along the line. Standardized powered straight sections, curves, switches, etc., are operated by remote control and easily adjusted to required speeds. Wendway will smooth out your assembly processing, packing or inspection problems and pay for itself in time and equipment saved.

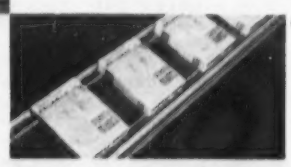
Remember ...Wendway answers your 'light product' conveying problems • Wendway complies with even the most rigid sanitation codes • Wendway synchronizes perfectly with other production line equipment • Wendway increases producton line profits.

Another interesting Wendway installation. Twin flights of wide belt Wendway operate continuously between production stations to convey air filters to inspection stations.



Wendway belting will not damage even the most delicate products. Automatic conveying assures products of cleaner, fresher, neater appearance.

Overhead cooling for cooked or heated products saves you time and floor space. Wendway takes 'em up, cools 'em off and brings them down—automatically!



Cartons, fragile packages, etc., are completely safe on Wendway. Smooth, silent travel delivers products in perfect shape, clean and fresh in appearance.

Write today for additional information, literature and specifications to match your conveying requirements.

UNION STEEL PRODUCTS CO., ALBION MICHIGAN

Gentlemen:
Please have your area distributor contact me at once.

Name _____ *Title* _____

Company _____

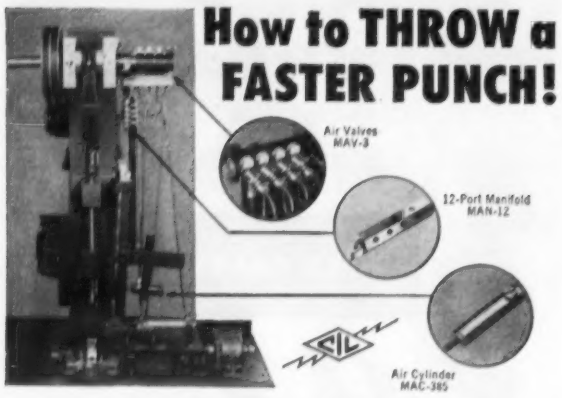
Address _____

City _____ *Zone* ____ *State* _____

The product to be conveyed is _____

For more details circle NED-375 G7 on enclosed inquiry slip

How to THROW a FASTER PUNCH!



The aluminum cans shielding the R.F. coils we make for one of America's largest T.V. manufacturers need two clean holes punched on each side and one at the top. This was a wastefully time consuming job until we made the machine, shown above, to do the job automatically.

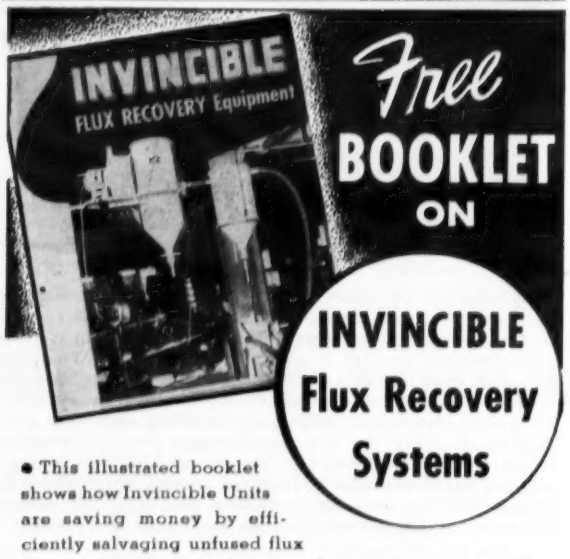
Now, thanks to Clippard Miniature Air Valves, Cylinders, Manifolds, Accessories and Fittings, used in the positions shown, we throw not only a FASTER punch, but a BETTER, CLEANER one!

Because of their versatility in control and work feeding operations, small size and ease of mounting, you, too, will find Clippard Miniature Pneumatic Devices useful in speeding production and improving quality of work. Keep an adequate supply in YOUR stockroom ready for immediate use! Write, NOW, for free literature and attractive prices.

DEALERS-DISTRIBUTORS: Write for attractive NEW sales proposition

Clippard INSTRUMENT LABORATORY, INC.
7360-N Colerain Road, Cincinnati 24, Ohio
Manufacturers of R.F. Coils, Electronic Equipment, Miniature Pneumatic Devices

For more details circle NED-376 G7 on enclosed inquiry slip



• This illustrated booklet shows how Invincible Units are saving money by efficiently salvaging unfused flux on submerged arc welding jobs. Invincibles operate more rapidly and far better than any manual method. Also, by eliminating fine dust ("flour") from the salvaged flux, they reduce welding rejects. Invincible Units are compact, easily installed and able to withstand continuous operation.

Send for your copy of this booklet now!

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

For more details circle NED-377 G7 on enclosed inquiry slip

ERIEZ Magna-Mover automatically conveys and elevates small steel parts—offers many AUTOMATION ADVANTAGES

New, slim model permanent magnetic conveyor-elevator has bed only 8" wide! *Magnetically* moves small items such as nails, caps, stampings, parts, etc., up inclines from 60° to 90°. Lightweight, space-saving. Items are held firmly and safely to the conveyor belt by lifetime-powered non-electric magnets, and are automatically discharged. Magna-Mover reduces manual handling—lowers production costs. It cuts down loading and unloading delays—increases production. Reduces damaged parts—increases quality. Reduces manpower fatigue—saves on labor costs. Two models: 31-SN-12, for average conveying-elevating purposes; 31-SN-6, has greater magnetic strength for heavier parts.

ERIEZ HI-POWR MAGNETIC SEPARATORS

Magnetic SEPARATION AUTOMATION VIBRATION equipment

For literature on the complete line of Magna-Movers, write for BIG NEW BULLETIN.

ERIEZ MFG. CO., 80-U Magnet Drive, Erie, Pa.

For more details circle NED-378 G7 on enclosed inquiry slip

AIR COMPARATOR GAGE
applicable in measurement control

Filter, pressure regulator, pressure gage, adjustable restriction unit and gaging indicator comprise the Model L air comparator gage. The gaging indicator graduated scale is calibrated by minimum and maximum masters. Thus, operator reading directly from scale graduations notes the workpiece size. Workpiece can be inspected for roundness, taper, bell mouth, straightness, size, external and internal diameters, parallelism and wall thickness. Full scale readings to 0.0015, 0.002, 0.003 and 0.004-in. are offered. Gage is equipped with steel, chrome plated and tungsten carbide gaging plugs. Made by **Freeland Gauge Co.**, 9938 Freeland Ave., Detroit 27, Mich.

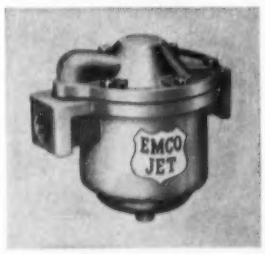
For more details circle NED-379 G7 on enclosed inquiry slip

TWO-WAY RADIO CONTROL
mounts on arm over desk

Transistors and miniaturized components of the Minitrol combination talk-hear-control unit make possible its mounting on an adjustable arm over the dispatcher's desk. Its single compact case contains microphone, speaker and controls necessary for station operation of two-way radio systems. Unit can be preset for hand-free use or provided with foot switch for transmitter operation. Size is 6½ x 2½ x 2 in. Made by **Radio Corp. of America**, Communications Products Dept. NED, Bldg. 15-2, Camden 2, N. J.

For more details circle NED-380 G7 on enclosed inquiry slip

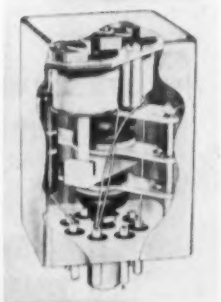
AUTOMATIC AIR FILTER
protects air-operated devices



Automatic Emco Jet L-200A-½-in. air filter automatically prevents moisture, sludge and other foreign substances from entering air-operated devices working on intermittent air flow. Unit operates at 90 cfm, at maximum pressure of 300 psi. Internal parts have been treated to pass 100-hour salt spray test. Filter will operate for years without maintenance, although filter examination from time to time is recommended. If clogged with foreign matter, filter can be cleaned with a solvent. Made by **Emco Pneumatic Corp.**, Dept. A12, 1317 Locust St., Des Moines, Iowa.

For more details circle NED-381 G7 on enclosed inquiry slip

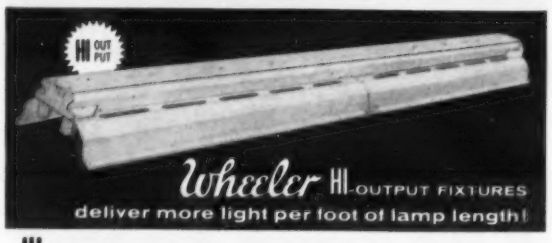
OSCILLATOR CONTROLS
maintain output within close limits as components for oscillators



Accurate output frequency and output voltage with very nearly sinusoidal wave shape are features of Frahm type ROC4 and ROC2 resonant reed oscillator controls. Strictly circuit components for electric oscillators, they can control frequency, but cannot produce or sustain electric oscillations when used by themselves without appropriate electric oscillatory circuits.

Controls can be made with any one nominal control frequency between 20 and 1100 cps. Output is controlled constant within ±0.15 per cent of nominal control frequency. Applications include electrical and acoustical measurement, electrical communication systems, by-pass filters, remote operation and supervisory control of machinery, and electrical computers and telemetering systems. Made by **James G. Biddle Co.**, Dept. 34-23, 1316 Arch St., Philadelphia 7, Pa.

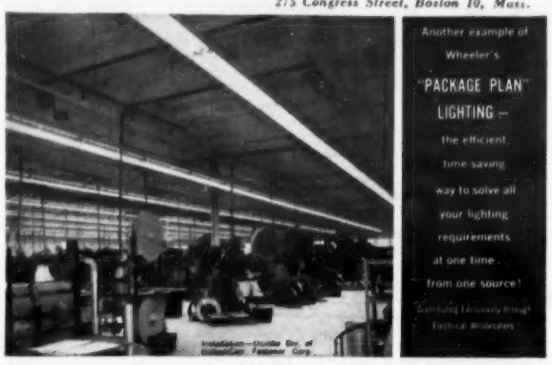
For more details circle NED-382 G7 on enclosed inquiry slip



HI-OUTPUT "D-8500" LINE FIXTURES by Wheeler — designed for use with 100 watt and 60 watt rapid start lamps operating at 800 MA. Diffuser apertures provide a small upward component of light to relieve severe brightness contrast . . . and allow for heat dissipation. Wheeler "D-8500" Hi-Output Fixtures are ideally suited for medium to high mounting applications.

Ask your electrical wholesaler — or write

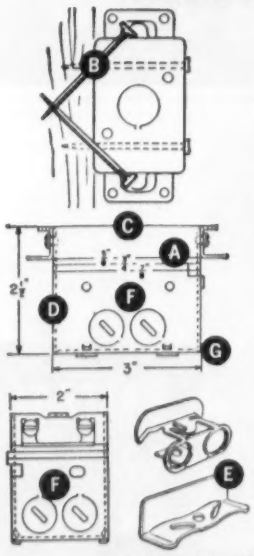
Wheeler Reflector Company
DIVISION OF FRANKLIN RESEARCH CORP.
275 Congress Street, Boston 10, Mass.



For more details circle NED-383 G7 on enclosed inquiry slip

NOW! Non-Gangable Switch* Boxes

join the National Electric "REDEGE" Line



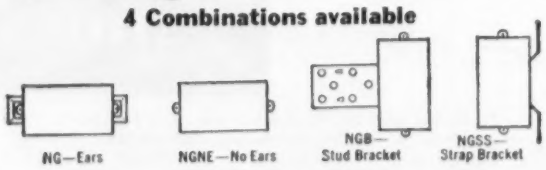
11 NG series
for non-metallic sheathed and flexible cable

12 NG series
for armored cable and flexsteel conduit

CHECK THESE FEATURES:

- A Plaster Line Gradation marking on the box
- B Diagonal and through nail holes
- C Plenty of capacity (12.8 cubic inches)
- D 14 Gauge Electro-Galvanized steel
- E 2 Cable clamps (each type)
- F 2 pri-outs—each end and each side
- G Square corners

4 Combinations available



Listed by Underwriters' Laboratories Inc.
Stocked by Leading Distributors everywhere.

National Electric Products
PITTSBURGH, PA.
2 Plants • 12 Warehouses • 41 Sales Offices

For more details circle NED-384 G7 on enclosed inquiry slip

Here's 85 cfm of smooth, dependable

GYRO-FLO AIR POWER

for your small jobs

With the Gyro-Flo 85-cfm rotary compressor, you can save time, effort and expense on a host of small jobs where a larger compressor is not needed. This newest addition to the famous Ingersoll-Rand Gyro-Flo line weighs only 1840 lb as a complete portable unit, and only 1325 lb for truck mounting. For complete details, send for Form 2307.

Ingersoll-Rand

11 Broadway, New York 4, N.Y. 2-610

For more details circle NED-385 G7 on enclosed inquiry slip

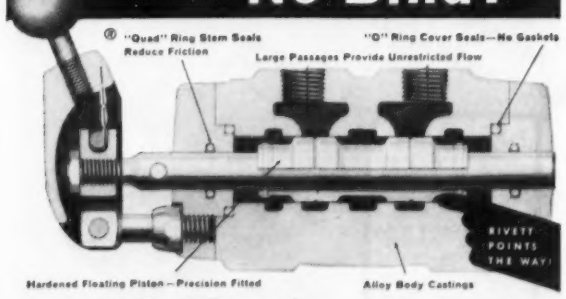
FLEXIBLE STORAGE

Independent and self-contained, they readily accommodate to changes in stock requirements. Easily relocated; no bolting. You get more into less space; you save time in storing and issuing with Brown Section Racks. Iron and steel construction. Can't burn, warp, sag. Never wear out. Eliminate safety hazards. Act now! Write for complete specs and prices on models and sizes. Brown Engineering Co., 129 N. 3rd Street, Reading, Pa.

BROWN QUICK-SERVE RACKS

For more details circle NED-386 G7 on enclosed inquiry slip

No Stick! No Bind!



-with Floating Piston!

Valve Stem is Independent of Valve Bore in Rivett Hydraulic Pipe Mounted Valves

- "Quad" Ring Stem Seals Reduce Friction
- Large Passages Provide Smooth, Full Capacity Flow
- Simple Design Assures Leakproof Operation
- Opens And Closes Smoothly, Positively
- Operates Multi-Million Cycles At 1500 P.S.I.

RIVETT, INCORPORATED
Dept. NED-7
Brighton 35, Boston, Mass.

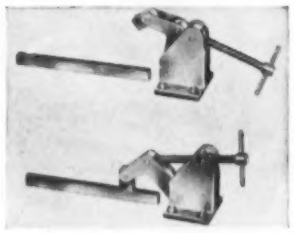
Get Catalog No. 204 to aid circuit design.

"QUAD RING" is the registered trademark of the Minnesota Rubber and Gasket Company.

RIVETT HYDRAULIC VALVES

For more details circle NED-387 G7 on enclosed inquiry slip

PRODUCTION CLAMP
pressure adjusts from 2 to 2000 lb



Fast clamping and releasing is provided by the No. 3FC Lightning Lock clamp which can be adjusted for pressures from 2 to 2000 lb. Varying thicknesses from 0 to 3 in. are clamped without adjustment. A buttress screw and special nut applies instant pressure. Screw is backed off one turn and handle is lifted and pulled back for instant retraction. Clamp has channel type construction. Body and arms are high tensile steel. Alloy steel screw and nut are built to withstand pressures to 2000 lb. Made by **General Alliance Corp.**, 2105 Moore St., San Diego 1, Calif.

For more details circle NED-388 G7 on enclosed inquiry slip

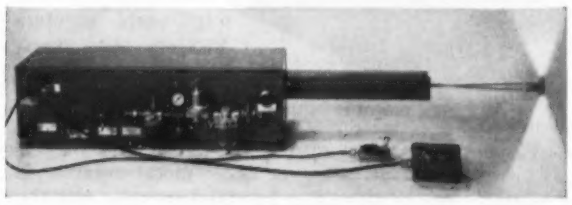
FAUCET REBUILDING KIT
contains 1080 repair parts

Practically any faucet or small valve can be repaired with the 1080 parts contained in the No. 100 Giant Handy Andy faucet repair kit. Included are all sizes of Fiberglas-reinforced faucet washers and a new Monel, self-locking screw. All required sizes of six-ply top bibb gaskets, heavy brass friction rings and heat-resisting graphite asbestos bonnet packings are also contained in the kit. Two lengths of 10-24 Monel screws and a 10-24 tap replace the 30 screw sizes that would otherwise be required. Heavy gage metal case has locking cover and carrying handle. Chart on inside cover describes contents of each compartment and gives repair instructions. Offered by **J. A. Sexauer Mfg. Co.**, Dept. 39, 2503-05 Third Ave., New York 51, N. Y.

For more details circle NED-389 G7 on enclosed inquiry slip

AUTOMATIC DIE LUBRICATOR
handles any lubricant required

Manual swabbing of lubricants to dies is eliminated by use of this automatic C.A.L. lubricator. Machine applies lubricants to dies used in die casting,



forging and cold-drawing machines. It also finds use in specialized glass molding, stamping, punching, rolling and similar operations. The air-operated machine will handle any lubricant required and is electrically actuated by the press. Nozzle advances, spray-coats surfaces of dies, and then retracts automatically. Amount of lubricant is readily controlled, as is cycle. Mounted outside the die blocks, it can operate at over 5000 cycles per hour. Made by **Columbus Automatic Lubrication Co.**, Dept. N, Box 1145, Columbus, O.

For more details circle NED-390 G7 on enclosed inquiry slip

MACHINE LOADMETER
has variable range calibration

Tool wear indications and power readings can be obtained on machines powered by direct current through use of the model L-122 DC loadmeter. Amperage range of the direct current meter is changed by hand adjustment of the calibrator. Meter is made in standard ranges from 9 to 45 amp and 25 to 150 amp. Special models with 0.3 to 450-amp ranges are available. Meter has cushioned sapphire jewels to absorb vibration and shock and a dial calibrated in per cent of load. Made by **Futurmill, Inc.**, 6360 Highland Rd. N.W., Pontiac, Mich.

For more details circle NED-391 G7 on enclosed inquiry slip

Quickdraft... the world's most efficient power exhauster

N-400 QD

...for industry

★ NO MOTORS, FANS OR BEARINGS IN EXHAUST LINE
★ NEEDS NO STACK
★ ACID RESISTING VITREOUS ENAMEL FINISH

Quickdraft improves industrial exhausting and cuts maintenance costs. Its blower operates in clean or outside air . . . eliminating down-time for cleaning and replacing fan blades. Quickdraft excels in venting paint booths . . . lightweight and abrasive waste . . . cellophane cuttings . . . chemical fumes . . . corrosive gases . . . noxious fumes . . . high temperatures . . . moisture and smoke. For heating units, it maintains constant draft required for efficient and economical combustion of all fuels. *Send for engineering data . . . today.*

Quickdraft COMPANY
P. O. Box 87-L, Dueber-Hampden Bldg., Canton, O.

NOW, all sizes can be furnished with static pressures up to 10-inches . . . and in type-1 Rigid Polyvinyl Chloride for withstanding highly corrosive acids.

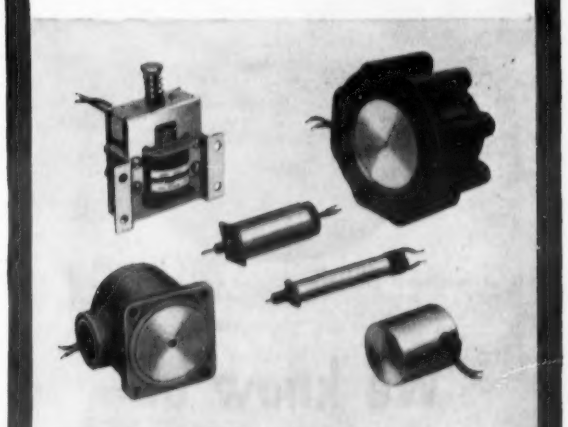
For more details circle NED-392 G7 on enclosed inquiry slip

NATIONAL ACME

Solenoids

STANDARD or CUSTOM ENGINEERED to fit your design

To meet specific job requirements, solenoids of special shapes and sizes are designed and built through co-operation of our engineers with yours.



NATIONAL ACME OFFERS ***2-Way Machine Design Service***

First, National Acme supplies solenoids so dependable that they have become standard components in the majority of the most rugged machine tools. Second, National Acme offers you sound application experience, based upon successful performance in many fields.

National Acme solenoids will make *your job easier*—because they do *their job better.*

1. *Armored contact points—for millions of operations*
2. *Non-magnetic retainers*
3. *Compact—for use where space is limited*
4. *Rugged enough for heaviest duty*
5. *Available with terminal blocks and variety of standard mountings*
6. *Made in Push and Pull types, within sizes from 2½ to 21 lbs. at ½-inch stroke; 2 to 25 lbs. at 1-inch stroke.*

If you are ready to discuss your problem, ask us to send a National Acme representative. If you want more information first—send for BULLETIN EM-52

Electrical Manufacturing Division

National Acme

The National Acme Company • 182 E. 131 St. Cleveland 8, Ohio

For more details circle NED-393 G7 on enclosed inquiry slip

to Measure Speed
and Study Machines
in S-L-O-W motion

G-R Strobotac®

Portable Stroboscopic Tachometer

Direct Reading from 60 to 14,500 rpm — measurements to 100,000 rpm made simply

Accuracy of 1% above 900 rpm

Makes any Revolving or Reciprocal Cyclic Machine or Part appear to operate in slow motion — as slow as a fraction of an rpm if desired

Thousands used in research, design, inspection and maintenance in leading plants throughout the world

WRITE for the STROBOSCOPE BULLETIN for Complete Information

type 631-B Strobotac $160

GENERAL RADIO Company

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For more details circle NED-394 G7 on enclosed inquiry slip

Loren Farris
PERSONNEL DIRECTOR
Detroit Division
Chicago Rawhide Manufacturing Co.

"We know of no safer hand cleaner than Lan-O-Kleen"

"We've always been interested in preventing dermatitis. This is why we've supplied our plant employees with LAN-O-KLEEN for the past ten years. Its free lanolin and soft cleansing action help prevent skin irritations, yet quickly remove dirt, grease and grime," says LOREN FARRIS, Personnel Director, Detroit Division of Chicago Rawhide Manufacturing Company.

"Several of our departments have also used West ANTISEPTIC PROTECTIVE HAND CREAMS for a number of years. We know these aids to comfort and safety help keep our workers on the job at maximum efficiency."

FREE

Would similar results interest you? Send for our 24 page booklet "The Control of Dermatitis in Industry." Just check the reader inquiry service in this magazine. Or write—

WEST DISINFECTING COMPANY
Dept. 16, 42-16 West Street, Long Island City 1, N. Y.

For more details circle NED-395 G7 on enclosed inquiry slip

CONVEYOR LINE SCALE
accurate to 1 part in 1000

Large - capacity electronic Checkweigher scale is designed for conveyor line use to determine short weight. Scale will indicate weight within ½-second after load is applied to platform and is accurate to better than 1 part in 1000. All required settings with range from one-fourth to full scale are made with control panel dials. Capacities of 50 or 100 lb are standard. Unit can be adapted for over-under-and-on indication, to count overweight, underweight and correct-weight packages, or to handle weight data in tabulated or digital form. Conveyor platform is 30 x 18 x 12 in. with eight 2-in. diameter aluminum rollers. Made by **Triner Scale & Mfg. Co.,** 2716 W. 21st St., Chicago 8, Ill.

For more details circle NED-396 G7 on enclosed inquiry slip

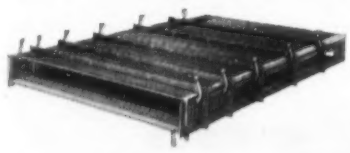
PLASTIC PIPE UNION
3-in. screwed type for 150° F

Corrosion resistant rigid polyvinyl chloride used in this 3-in. screwed pipe union enables it to withstand corrosive fluids encountered in food, chemical, refining, paper mill and marine applications. Joints provide a tight seal against flow leakage. Material resists most salts, alkalies and acids at up to 150° F. Weight is 1½ lb. Threaded or solvent-weld socket type ends in high or normal impact PVC are available. Made by **Walworth Co.,** Dept. NED, 60 E. 42nd St., New York 17, N. Y.

For more details circle NED-397 G7 on enclosed inquiry slip

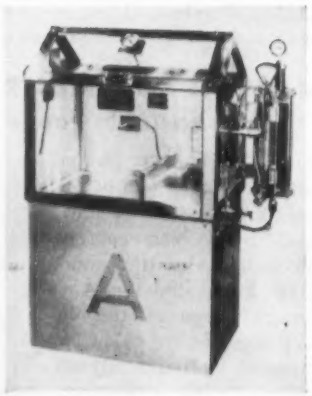
CONVEYOR HEATER-COOLER
distributes temperature evenly

Problem of even distribution of temperature on all sides of a traveling conveyor belt in either a heating or cooling process is solved by use of a duct made up of standard Thermo - Panels. Embossed pattern in each of two sheets of a specified metal creates flow channels for media used for heating, cooling or drying. A Thermo-Panel coil consists of the two sheets welded together. No special jacket or sheet metal outer duct is needed. Inside sheet can be stainless steel and the outer sheet carbon steel. Joined sectional construction (shown) makes possible any required length of duct. Similar construction can be used as an air duct. Made by **Dean Products, Inc.,** Dean Thermo-Panel Coil Div., 616E Franklin Ave., Brooklyn 38, N. Y.



For more details circle NED-398 G7 on enclosed inquiry slip

SALT SPRAY TEST CHAMBER
suited for environmental testing



Products of electronic, instrument, aviation, marine, general metals and other industries can be environmentally tested for salt fog corrosion resistance in this all-Lucite salt spray test chamber. Designed to military specifications, it produces a fine mist and reaches test conditions within 15 minutes when connected to a low pressure air supply. Specimens to be tested are suspended from or supported on Lucite rods. Test in progress is visible from all angles in the 20 x 20 x 20-in. chamber. Temperature controllers and indicators for chamber and air saturation tower are included. Made by **Associated Testing Laboratories,** Dept. N, 412 Clinton Rd., Caldwell, N. J.

For more details circle NED-399 G7 on enclosed inquiry slip

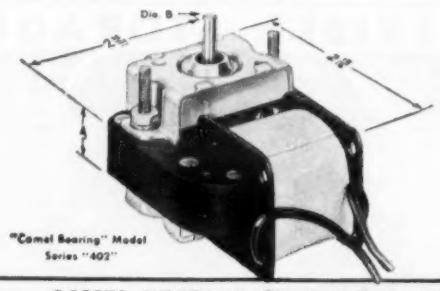
FREE... 64 PAGE CATALOG

WORLD'S LARGEST LINE OF WORK HOLDING EQUIPMENT—CHUCK JAW BLANKS, CAST ALUMINUM AND MALLEABLE KNOBS, WHEELS, HANDLES—PLUS HUNDREDS OF OTHER JIG AND FIXTURE COMPONENTS

COMPLETE DETAILED SPECIFICATIONS
ENGINEERING DRAWINGS • COST SAVING DATA
write for your copy—TODAY!

JERGENS TOOL SPECIALTY CO.
Dept. NE-7 712 E. 163rd St., Cleveland 10, Ohio

For more details circle NED-400 G7 on enclosed inquiry slip



Soreng CAMEL BEARING Shaded Pole Motors Last Thousands of Hours Longer

Secret of the 402's EXTRA long life is its exclusive CAMEL BEARING. This special bearing bracket provides automatic, positive oil circulation as operating conditions demand—even under high temperatures.

Range of 12 models cover all types of installations including springwire, gear, chain, rubber belt and friction drives, or to move high velocity, heater or sirrocco air. A complete range of shaded pole motors for standard-life applications is also available.

Send for your copy of Soreng's informative booklet on Shaded Pole Motors

CONTROLS COMPANY OF AMERICA
Manufacturers of SORENG controls
9577 SORENG AVENUE • SCHILLER PARK, ILLINOIS

controls that make modern living possible

For more details circle NED-401 G7 on enclosed inquiry slip

If your problem is to handle heavy heating oils, you will find Viking Pumps unbelievably smooth and dependable. And if you have never used a Viking, you're really in for a pleasant surprise.

No matter what capacity you want, there is a Viking Pump in the size and type to do the job. For more information, send for Bulletin 57Sg today.

VIKING PUMP COMPANY
Cedar Falls, Iowa, U.S.A. In Canada, it's "ROTO-KING" pumps
See Our Catalog in Sweet's Plant Engineers File

For more details circle NED-402 G7 on enclosed inquiry slip

BEVERLY *Pneumatic* THROATLESS SHEAR

CAPACITY 3/16 MILD STEEL 10 GA. STAINLESS

FASTER, EASIER CUTTING *to any Shape!*

- Compactly built for maximum visibility and efficiency
- Operates on 35 to 150 PSI air pressure
- Adjustable power and return stroke length and speed

Beverly Pneumatic Shears combine all the advantages of Beverly Throatless Shears with fast, effortless cutting action through air cylinder operation. Air operation speeds work, permits accurate cutting to a pattern or template, as operator can concentrate on guiding work through the shear. Flow control valves permit precise adjustment of stroke speed; adjustable actuating arm controls stroke length. Foot Switch permits operator to use both hands on the work piece. Operates on 110V. 60 cycles AC and 35 to 150 PSI air pressure.

See your nearby Beverly Distributor

Write for catalog sheet and complete details.

BEVERLY SHEAR MANUFACTURING CO.
3016 W. 111th STREET • CHICAGO 43, ILLINOIS

For more details circle NED-403 G7 on enclosed inquiry slip

Safe—Rigid Tri-Forged

GRATING

Forge welding double triangular-shaped cross bars to the bearing bars adds rigidity and safety to Dravo 1-W-4 Tri-Forged Grating.

Solid one-piece construction. Standard opening between bearing bars is 1". Cross bars are 4" center to center. Safe, smooth weld eliminates dirt-catching corners.

For information, write Dravo Corporation, Dept. D-2507, Pittsburgh 22, Pa.

DRAVO CORPORATION

For more details circle NED-404 G7 on enclosed inquiry slip

NOELTING *Faultless* ENGINEERED

TRUCK CASTERS

CUT HANDLING COSTS

3300 Series Double Ball Bearing Swivel Plate Caster with Rubber Tired Wheel

NEW!

MAN-SAVER AND EXPEDITER for INDUSTRY

Here's the answer to your need for *extra* mobility . . . *extra* load capacity . . . *extra* output from less manpower. It's the ideal caster for quickly and quietly moving trucks or other mobile equipment and there's a clear profit from the *extra* mileage they give. Ask your supplier for Series 3300.

- **Jumbo Swivel**—large diameter ball races. Two full rows of balls rolling around hardened raceways formed in heavy steel plates.
- **Husky Horn**—heavy gauge steel sides and top plate riveted into single unit of surplus strength.
- **Oversize King-Pin**—machined to precision fit.

FAULTLESS CASTER CORPORATION
Evansville 7, Indiana
Offices in Principal Cities—Canada Factory: Stratford, Ont.

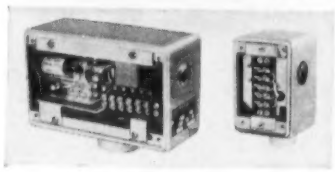
For more details circle NED-405 G7 on enclosed inquiry slip

GERMANIUM POWER RECTIFIERS
six types in series rated 330 amps

Low current density, high capacity germanium power rectifier junctions have corrosion and moisture resistant cast aluminum housings with airfoil cooling fins for maximum heat dissipation. Series of six types is rated at 330 amps rectified output current at voltage ratings from 20 to 66 v rms. Efficiency is up to 98.5 per cent. Six of the 4 3/32 x 3 x 3¼-in. units connected in a three-phase bridge circuit will deliver 85 kw (1000 amps @ 85 v) while occupying ½-cu ft of space. Applications include electrochemical manufacturing, copper refining, aluminum reduction, electroplating, electrotinning and anodizing equipment. Made by **International Rectifier Corp.**, 1523 E. Grand Ave., El Segundo, Calif.

For more details circle NED-406 G7 on enclosed inquiry slip

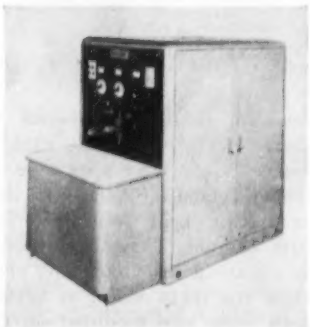
PHOTOELECTRIC RELAYS
made without amplifier tubes



Designed around a high power photocell, series of photoelectric relays is unaffected by weather, dampness, dirt, vibration, shock, temperature, humidity and voltage fluctuation. Relays are made without amplifier tubes to operate on 100-130 v 60/50 cycles and control their own internal relay. Smallest general-purpose type RPF1 nonadjustable photorelay is highly directional and controls 5-amp single-pole double-throw contacts rapidly. It is 4½ in. high and is built into standard one-gang conduit box. Largest type RPF3, adjustable from outside, operates from as low as 1 ft-c and is sensitive to 10-20 per cent change in illumination. It is practical as a smoke or turbidity alarm. Made by **Photobell Co.**, Dept. A, 43 Vesey St., New York 7, N. Y.

For more details circle NED-407 G7 on enclosed inquiry slip

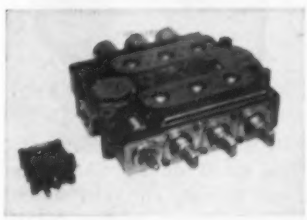
INDUCTION HEATERS
rated at 15, 30 and 40 kw



Each heater in line of 15, 30 and 40-kw electronic induction units can be custom designed for a specific heating application. Options offered include built-in high frequency output transformers, stepless power control, JIC electrical specifications, dustproof cabinet, built-in heat exchanger and pump, constant voltage filament supply, power tap switch, ceramic water columns and electronic keying. They can have single or two-position output. Power tubes provide overload capacity in both oscillator and rectifier sections. Complement of instruments and protective devices is incorporated. Made by **Magnethermic Corp.**, 4000 Simon Rd., Youngstown, O.

For more details circle NED-408 G7 on enclosed inquiry slip

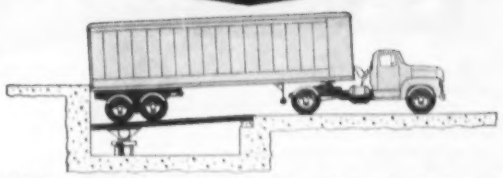
DIRECTIONAL CONTROL VALVE
has 150 gpm, 2000 psi capacity



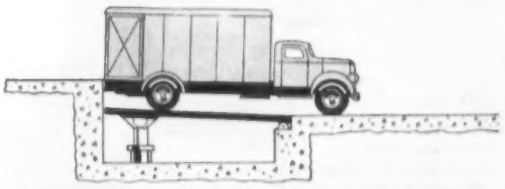
Equipped with three plungers, this Hydreco directional control valve for fluid power circuits will control single or double-acting cylinders used in earth movers, mobile equipment and other machines. It has a capacity of 150 gpm and 2000 psi. A check valve built into the control plunger prevents back flow from the cylinders when operating positions are changed. An overload relief valve is built in. Photo compares size with similar 5-gpm unit. Made by **New York Air Brake Co.**, Kalamazoo Div., 9008-5 E. Michigan, Kalamazoo, Mich.

For more details circle NED-409 G7 on enclosed inquiry slip

Rotary **TRUCK LEVELER**
saves dock space • speeds loading



High truck beds are lowered to dock level



Low truck beds are raised to dock level

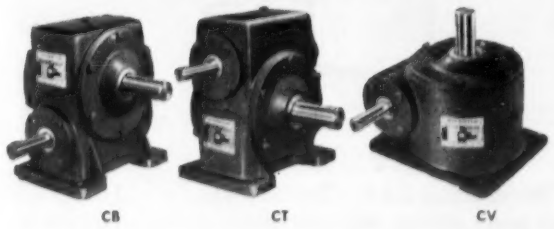
The Rotary Truck Leveler, using economical hydraulic power, handles any highway carrier at any dock. Easily installed at new or existing buildings. Write for catalog RE-800.

ROTARY LIFT CO., 1096 Kentucky, Memphis 2, Tennessee

For more details circle NED-410 G7 on enclosed inquiry slip

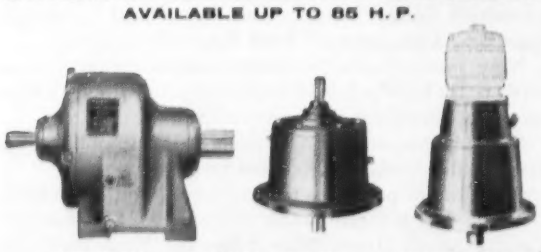
VERSATILE PERFORMANCE for your BIG JOBS, too, in SPEED REDUCTION

WINSMITH WORM GEAR REDUCERS
AVAILABLE UP TO 34 H. P.



CB CT CV

WINSMITH DIFFERENTIAL REDUCERS
AVAILABLE UP TO 85 H. P.



HORIZONTAL FLANGE MOUNTED VERTICAL MOTORIZED

- The stock line of Winsmith Speed Reducers offers a wide variety of rugged, heavy duty units designed to handle *all your* speed reduction problems involving high input horsepower. Worm gear reducers are available in horizontal or vertical types, with right angle or parallel shafts . . . worm on top or worm on bottom. The Winsmith Differential line offers equal versatility with three stock types—Horizontal, Flange Mounted, or Vertical Motorized.

It will pay you to standardize on Winsmith — the most complete line for all your speed reduction jobs — big or small — from 85 h.p. down to 1/100 h.p.

COMPLETE ENGINEERING DATA on hundreds of types and sizes of Winsmith reducers is included in Catalog #155 — write for your copy today.

WINSMITH SPEED REDUCERS

WINSMITH, INC.
119 Eaton Street, Springville, (Erie County), N. Y.

For more details circle NED-411 G7 on enclosed inquiry slip

Sesco positive holding CAM CLAMPS

THEY MAINTAIN POSITIVE HOLDING PRESSURE—NEVER LOOSEN . . .

The effective clamping range solves the problem of variations in stock thickness up to ¼" and eliminates troublesome readjustments.

LAST INDEFINITELY . . .

→ because of heavy steel construction and precision assembly.

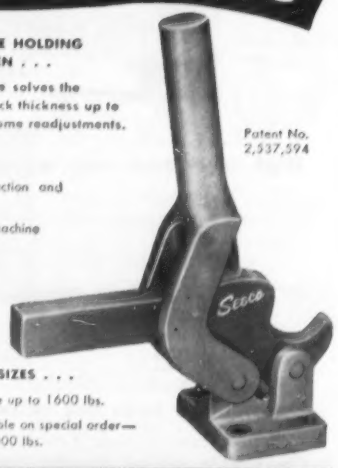
→ singly, or in multiple, on any machine tool, or operation.

→ and withstands severe vibrations, even on milling operations.

AND, THEY'RE AVAILABLE FROM STOCK IN 4 STANDARD SIZES . . .

→ with maximum holding pressure up to 1600 lbs.

→ and, 2 larger sizes are available on special order—with holding pressure up to 8000 lbs.

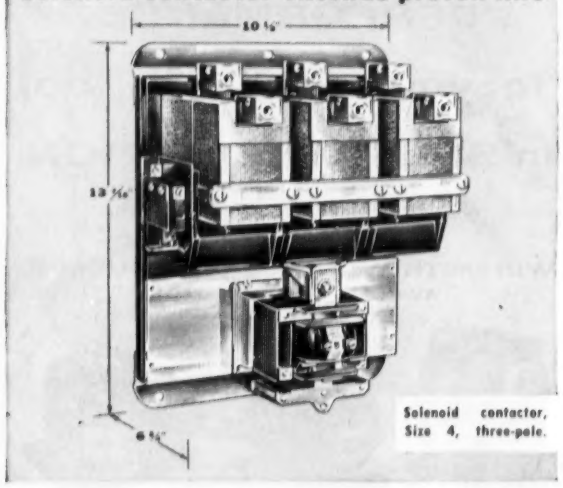


Patent No. 2,537,594

SESCO INC. 8881 Central Detroit 4, Michigan

For more details circle NED-412 G7 on enclosed inquiry slip

NEW 150-AMP
solenoid contactor extends proven line



Solenoid contactor, Size 4, three-pole.

This new Size 4 A.C. solenoid contactor is ideal for use in motor starters and controllers, as well as for resistance heating and lamp loads.

It's the new Bulletin 4454 — incorporating many advanced design features found on Ward Leonard's Sizes 0 to 3 contactors. Check these advantages:

New sintered-silver-cadmium-oxide contacts—can repeatedly handle high inrush currents without a sign of contact welding or excessive pitting.

Simple, compact solenoid design—excellent for modern metal control panels, front-of-board wiring.

2 or 3 main poles, up to 4 side-mounted auxiliaries.

Write for Bulletin 4454. Ward Leonard Electric Co., 51 South Street, Mount Vernon, New York. (In Canada: Ward Leonard of Canada Ltd., Toronto.)

ENGINEERING DATA Size 4 A.C. Contactor Ratings*

Service	8-Hour Ampere Rating		Enclosed Power Rating	
			Three Phase	
	Open	Enclosed	Volts	H.P.
Across-the-Line Starting	150	135	110 220 440-550	25 50 100
Across-the-Line Plug-Stop or Jogging	150	135	110 220 440-550	15 30 60

Service	8-Hour Ampere Rating	Single Phase		Three Phase	
		Volts	K.W.	Volts	K.W.
Resistive Heating Load**	150	110 220 440 550	15 30 60 75	110 220 440 550	26 52 105 130
Tungsten Lamp Lighting or Infrared Heating Load**	120 Amperes for 250 Volt Circuits or Less				

*The ratings listed are those recommended by the National Electrical Manufacturers Association.
**These ratings apply to open or enclosed contactors. 7,9

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RESISTORS · RHEOSTATS · RELAYS · CONTROLS · DIMMERS

For more details circle NED-413 G7 on enclosed inquiry slip

DIAL BENCH GAGE
has two dial indicators

Designed to withstand rough handling, this dial bench gage is equipped with two 0.0001-in. dial indicators. Each instrument has revolution counters. Base is hardened and ground and the column is precision ground. The yoke permits measurements up to 2 in. Price is $68.50. Made by **Air Transport Equipment, Inc.**, Dept. NE, Albany Ave., Amityville, L.I., N. Y.

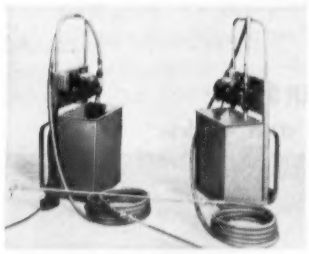
For more details circle NED-414 G7 on enclosed inquiry slip

AC POWER SUPPLIES
120 and/or 240-v, 60-cycle models

Five standard models comprise series of adjustable voltage, alternating current power supplies designed for lab testing, production line and maintenance use. Both 120 and/or 240-v 60-cycle models are now available with 400-cycle models to be offered soon. Eight current ranges from 0.5 to 100 amp are provided, with corresponding power ranges up to 12,000 w. Provision is made for remote location of meters and key controls. Housed in gray wrinkle finished cabinet with casters, test set measures 30½ x 23 x 18 in. and weighs 184 lb. Made by **Dayton Electric Mfg. Co.**, 124 S. Oakley Blvd., Chicago 12, Ill.

For more details circle NED-415 G7 on enclosed inquiry slip

CLEANING & DESCALING UNIT
for refrigeration, air conditioning



Acid solutions and ordinary solvents used to clean all types of refrigeration, air conditioning and heating condensers, coils, cooling towers, blowers and water heaters are handled by the Clean-it, a portable cleaning and descaling unit. It consists of two portable vinyl-coated acidproof tanks, each with its own reversing pump, hoses, and spray or suction fitting. Water-cooled condensers and coil tubes are descaled by recirculating acid solutions. Sediment settles to the tank bottom. Other types of equipment are cleaned by spraying hot detergent or solvent from one tank, while the dirty water is sucked back into the other. Both units are mounted on rubber tired wheels and have stair skids. Made by **Hastings Air Control, Inc.**, Dept. N-67-AC, 3215 Leavenworth St., Omaha 5, Nebr.

For more details circle NED-416 G7 on enclosed inquiry slip

TRANSISTORIZED RELAY
begins operation without warm-up

Control of bath or oven temperatures, maintaining liquid levels, monitoring photocells and tripping electric counters are among laboratory and industrial applications for the model 30 transistorized relay. Its three germanium junction - transistors reportedly will last indefinitely as long as the relay is used within its rated limits. As little as 12 microamperes input will actuate the unit which is ready to operate without a warm-up period. Unit can be used with any combination of normally-open or normally-closed input circuits and normally-off or normally-on outputs. Resistive loads up to 10 amp can be handled for short periods. It can be set to fail safe. Pilot light shows when the 115-v, 50-60 cycle ac relay is energized. Made by **Fisher Scientific Co.**, 376 Fisher Bldg., Pittsburgh 19, Pa.

For more details circle NED-417 G7 on enclosed inquiry slip

The TNC is a screw type coupling version of the improved BNC series for small co-axial connectors. This TNC series, made by the Eastern Division of Cannon Electric, is available in two types: low voltage and high voltage. Both types are ideal where minimum noise is desired. They are lightweight, waterproof, sealed connectors which will operate at any altitude.

New! Coaxial Connector—Screw Type Coupling

Latest RF Connector Series - The TNC

The high voltage TNC is recommended for AC rating up to 5,000 volts. Low voltage rating is to 500 volts. The TNC series is also available with collet cable clamp.

TNC Coaxial Receptacle SA—445

Write for RF Coaxial Bulletin DC-1 TODAY! Please Refer to Dept 113

CANNON PLUGS

CANNON ELECTRIC CO., 3208 Humboldt St., Los Angeles 31, California

For more details circle NED-418 G7 on enclosed inquiry slip

NEW! R-9921
POCKET RESPIRATOR

A "bit type respirator" — exceptional in performance, low in price, compact (3" x 3" x 2¾"). Lightweight (4 oz.) Long Service Life. Multiple Protection. Noncorrosive. Practically Indestructible. Easily Dismantled. Easily Sterilized. Has complete inhalation and exhalation valve systems. Replaceable parts if needed. 3 companion models. Any of the 12 filter cartridges used in the AO R-5000 series respirator fit the pocket respirator.

Your nearest AO Safety Products Representative can supply you. Always insist on Trademarked Safety Products.

American Optical Company SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS

For more details circle NED-419 G7 on enclosed inquiry slip

Conversion to NYLON-GEAR BY SMALL-LOT MOLDING PROCESS

ACTUAL SIZE ACTUAL SIZE

SAVES 26¢ PER UNIT

This Zytel 101 Nylon Beveled Gear replaced a machined gear that formerly cost 59¢ each. After the initial tooling costs we die-molded it in one operation by our special injection process at 33¢ each.

COST ANALYSIS:
Tooling, set-up and first 100 pieces, including material and trimming $286.00

Additional 100 lots: $33.00

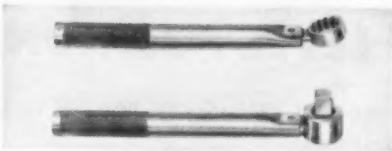
In addition to a cheaper piece price and equal wearing qualities, the Nylon Gear proved rustproof, noiseless, required no oiling and weighed less.

Let us quote on your Short-Run Plastic Moldings. We will gladly submit quotations without obligation.

DAYTON ROGERS Manufacturing Company
Minneapolis 7E, Minnesota

For more details circle NED-420 G7 on enclosed inquiry slip

ACCURACY
. . . in any range!



You can apply torque accurately in any range with Apco Mossberg Torque Wrenches. Apco rigid frame torque wrenches available in 0-300 in. lb., 0-2400 in. lb., 0-25 ft. lb., and 0-200 ft. lb. ranges . . . feature large, easy-to-read dials plus removable-reversible plugs.

Apco Midget Micro-Set torque wrenches can be pre-set in any range of inch ounces or from 0-300 inch pounds . . . measure only 6" to 10" overall. Box end, open end, square or ratchet drive.

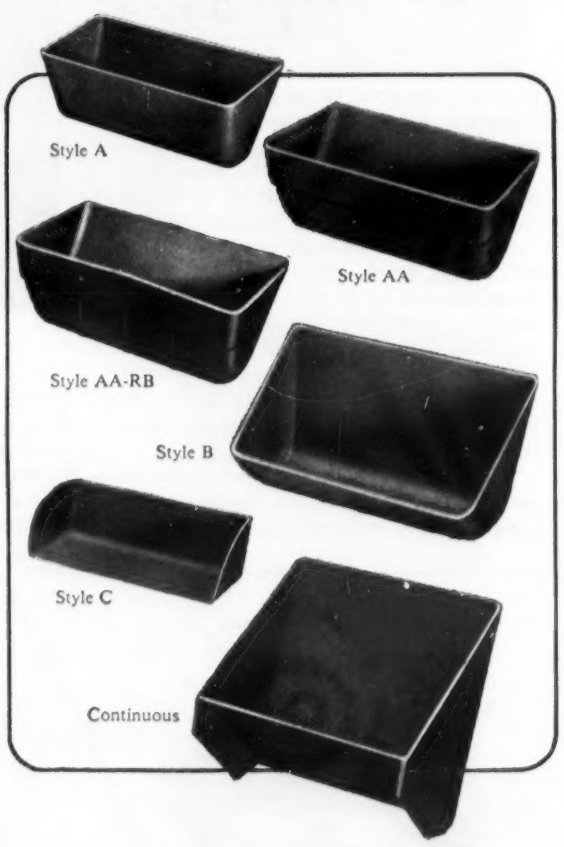
WRITE FOR DETAILS!

APCO MOSSBERG COMPANY
161 Lamb Street Attleboro, Massachusetts

For more details circle NED-421 G7 on enclosed inquiry slip

LINK-BELT cast elevator buckets

for . . . a variety of materials
. . . a wide range of capacities



Whether you handle dry or sticky . . . pulverized or coarse . . . light or heavy materials—Link-Belt can furnish the type and size of cast elevator buckets to meet your specific operating requirements. Design features include reinforced corners for extra strength—smooth, seamless surfaces for quick, easy pickup and discharge. What's more, they're available in malleable iron and Promal. For facts, see your nearby Link-Belt office or authorized stock-carrying distributor. Ask for Book 2465.

LINK-BELT

CAST ELEVATOR BUCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,402

For more details circle NED-422 G7 on enclosed inquiry slip

PARTS FEEDER & COUNTER
20-in. unit handles variety of parts

High speed 20-in. Hoppermatic parts feeder and counter will handle nuts, bolts, screws, rivets, washers, lockwashers, pharmaceutical tablets, capsules, die cast parts, rubber washers and screw machine parts. Change-over from one size or shape to another is made in about 5 minutes. Production rates up to 200,000 parts per hour are possible, depending on type of part being hoppered. Unit features long discharge track, ball bearing support of outboard portion of drum and space to accommodate 2, 3, 4 or 5 tracks. It is driven by 1/15-hp gear head motor. Knock-off wheel is driven by separate 1/70-hp motor. Unit operates on 110-v ac. Made by **U. S. Engineering Co.**, 40-22 22nd St., Long Island City 1, N. Y.

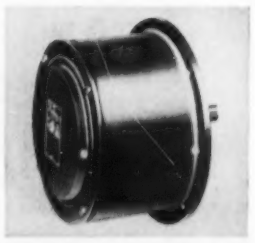
For more details circle NED-423 G7 on enclosed inquiry slip

HAND NAILER
holds, drives nails in small areas

Brads, nails and spikes can be driven in close quarters with the Schil-Dilly nailer. Adjustable spring clip holds nail in position during driving. Tool can be used in areas where a hammer cannot be used, without danger of marring surfaces or hitting fingers. Plunger hammer with knurled handle is thrust forward in the hollow steel holder to hit the nail which cannot bend during driving. Standard, professional and heavy duty models are 9, 12 and 15 in. long and sell for $4.95, $5.95 and $6.95, respectively. Made by **Schil-Hall Tool & Mfg. Co.**, Dept. SDN, 1621 Milwaukee Ave., Chicago 47, Ill.

For more details circle NED-424 G7 on enclosed inquiry slip

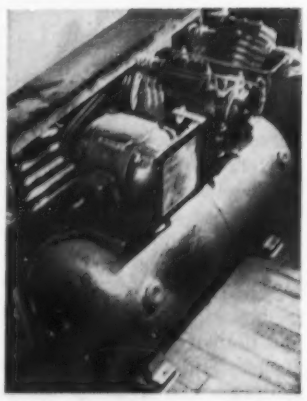
SPACE-SAVING MOTORS
in ratings from 1/2 to 5 hp



All NEMA standards are met by line of spacesaver motors offered in single, two and three-phase types. Single-phase 50/60 cycle units for 115/130 v are constant speed, continuous duty units in 1/2 to 3 hp ratings with temperature rise of 50° C in the dripproof and 55° C in the enclosed fan-cooled designs. Two and three-phase 1/2 to 5-hp units rated 50/60 or 20 cycles, 110, 208, 220/440 or 550 v, are also constant speed, continuous duty motors with temperature rises to 40 and 55° C for dripproof and enclosed fan-cooled units, respectively. Motors have prelubricated, double-shielded ball bearings and are offered in special torques, mounting enclosures and duties. Made by **Peerless Electric Co.**, 1401 W. Market St., Warren, O.

For more details circle NED-425 G7 on enclosed inquiry slip

VIBRATION ABSORBING PAD
for mounting machines without bolts



Polyvinyl chloride resins reinforced with glass fiber comprise Tiger Paw vibration pad for holding machinery to the floor without the use of adhesives or bolts, and at the same time eliminating vibration problems. Material withstands oil, soap, detergents, water, fungus, acids and salts. It is offered in 22 x 22-in. sheets, or cut to proper machine foot size. Made by **Bullard Clark Co.**, E. H. Jacobs Northern Div., Dept. A, Danielson, Conn.

For more details circle NED-426 G7 on enclosed inquiry slip

Continuous Threaded
STEEL ROD BY SINTZ

Sintz crt* threaded rod gives you these important time-money saving features.

- **Quality—Made from #1010 CISI cold rolled steel**
- **Smoother, More Uniform Threads**
- **Greater Strength**
- **Low Cost.**

Try SINTZ once and you'll be convinced.

*Cold Rolled Threaded—Bends Cold

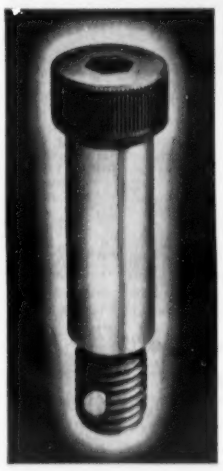
ORDER FROM YOUR MILL SUPPLY HOUSE—INDUSTRIAL JOBBER OR DIRECT FROM . . .

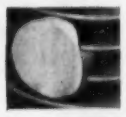
CLAUDE SINTZ INC.
1928 STANLEY AVENUE
DETROIT 8, MICHIGAN

STUDS • FORMED RODS • PIPE PLUGS

For more details circle NED-427 G7 on enclosed inquiry slip

NEW—self-locking UNBRAKO shoulder screws





The Nylok* self-locking feature locks these screws securely in place. They won't work loose. Can be used repeatedly. Tough, resilient nylon locking pellets permanently installed. Familiar UNBRAKO knurled heads for sure finger grip and fast assembly—accurate hex sockets for positive nonslip internal wrenching. Heat treated alloy steel, controlled fillets, continuous grain flow, Class 3A threads fully formed close to shoulders for maximum strength and exact fit. Heads, bodies and threads concentric; shoulders held to fine tolerance for perfect fit. Successfully withstand temperatures ranging from —70 to 250°F. Standard sizes 1/4 to 3/4 in. Write for Bulletin 2193. Unbrako Socket Screw Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

*TM Reg. U.S. Pat. Off., The Nylok Corporation

UNBRAKO SOCKET SCREW DIVISION

STANDARD PRESSED STEEL CO.
SPS
JENKINTOWN PENNSYLVANIA

Unbrako Products are sold through Industrial Distributors

For more details circle NED-428 G7 on enclosed inquiry slip

For more details circle NED-429 G7 on enclosed inquiry slip

how much can you SAVE on loading, sealing or imprinting corrugated cases?

Put your production-line in high-gear with fully-automatic Packomatic machines which go all the way — or any part of the way — with corrugated shipping containers. Install a new packaging line or add to your present operation. Automate to save time, money. WRITE FOR COMPLETE BROCHURE No. 50A on forming, loading, sealing and imprinting equipment.

BALE SEALERS • CASE SEALERS • CASE IMPRINTERS
CASE FORMER-LOADERS • VOLUMETRIC FILLERS

Packomatic
T.M. Reg. U.S. Pat. Off.

J. L. FERGUSON COMPANY • JOLIET, ILLINOIS

For more details circle NED-430 G7 on enclosed inquiry slip

How can BROOK build better electric motors that sell for Less?

1 H.P. TO 600 H.P.

Open Drip Proof (shown), Totally Enclosed Fan Cooled, Totally Enclosed Non-Ventilated Single Phase, NEMA "C" Flange, Extended Shaft Pump Motors.

. HERE'S HOW —

Brook has warehouses and distribution all over the world. Brooks builds a.c. motors exclusively. As one of the oldest and largest motor manufacturers, Brook's production "know how" and volume result in motors built for a maximum service life at a lower cost.

• FAST DELIVERY OF ALL POPULAR MODELS:

Brook Motors are available from warehouse at Chicago, Dallas, Jersey City, Los Angeles, Memphis, St. Paul, Salt Lake City, San Francisco, Atlanta, Seattle, Tampa and other major distributing points.

BROOK MOTOR CORPORATION

Get the facts — send for brochure!

BROOK MOTOR CORPORATION
3553 W. Peterson Ave., Chicago 45, Ill.

For more details circle NED-431 G7 on enclosed inquiry slip

FLAMELESS BLOW TORCH

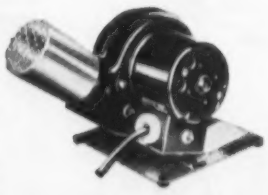
for quick heat
up to 1000°
without a flame

$37.50

For applications requiring quick concentrated heat blast up to 1000° without flame. Soften, form, mold and patch plastics, etc. Temperature varied by air intake adjustment. 110-120 V. AC-DC motor. 8 ft. heavy duty cord. Intermittent duty.

Other models available with lower temp. ranges.

AIR HEATER BLOWER



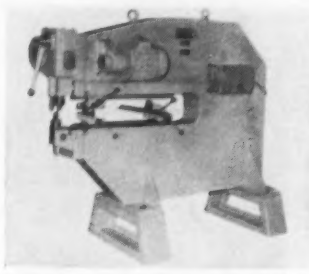
For quick electrically heated air up to 300°F. For accelerating drying processes or for localized heating. B.T.U. 3400. Air velocity 2000 FPM. 1000 Watts. 110-130 V. AC only. 8 ft. heavy duty cord. Continuous duty. 2" dia. x 3" long discharge nozzle. $37.50

Order through your local laboratory or industrial supplier or direct.

Master APPLIANCE MFG. CO.
RACINE, WISCONSIN

For more details circle NED-432 G7 on enclosed inquiry slip

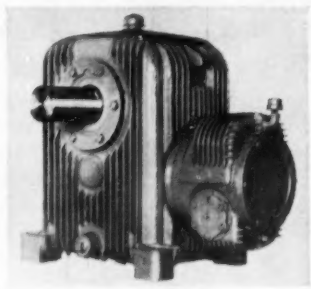
PLATE & SHEET CUTTER
will edge-cut 1/4-in. stainless plate



Heavy duty model P-9 plate and sheet working machine has edge cutting capacity of 3/8-in. mild steel plate and 1/4-in. stainless steel plate. Stationary lower tool and a reciprocating upper tool can be adjusted for eight different stroke lengths from 0.080 to 0.320 in. Its 4-hp motor operates at two different speeds and can be adjusted to operate at 500, 1000 and 2000 strokes per minute. Machine can perform straight, circle and irregular shearing, as well as slot cutting, beading, joggling, dishing, edge bending and flanging. It is available with power feed device and outside centering attachments from **American Pullmax Co.**, 2457 N. Sheffield Ave., Chicago 14, Ill.

For more details circle NED-433 G7 on enclosed inquiry slip

SPEED REDUCERS
four primary double reduction units



Coupled with the proper secondary, four standard primary double-reduction speed reducers provide reductions from 25:1 to 3500:1. The Cone-Drive double - enveloping worm gear type units are available with worm over or under, or gear shaft vertical in either right or left-hand or double extended shaft assemblies. Primary units have center distances of 2, 2½, 3 and 3½ in. Optional water cooling coils increase capacities in all sizes above 3-in. center distance. Primaries and secondaries are independently lubricated and have individual breathers, fillers and oil level gages. Made by **Michigan Tool Co.**, Cone-Drive Gears Div., 7204 E. McNichols Rd., Detroit 12, Mich.

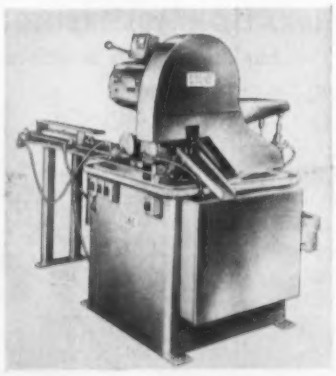
For more details circle NED-434 G7 on enclosed inquiry slip

SIGNS & NAMEPLATES
various types, sizes, metals offered

Baked enamel on metal signs and nameplates, die embossed or flat, are available in standard 12 x 18, 18 x 24, 24 x 24 and 24 x 30-in. sizes. Made of aluminum or steel, plain or reflectorized for night visibility, the signs have 6 to 10-year life finishes that resist salt spray and climatic changes. Color combinations can be used in showing company, product, address, phone number or other legend. Special designs, illustrations and emblems can be incorporated. Made by **Grimm Stamp & Badge Co.**, 8110 Rosalie Ave., St. Louis 17, Mo.

For more details circle NED-435 G7 on enclosed inquiry slip

CUTOFF MACHINE
for ferrous and nonferrous metals



Powered by a 10-hp continuous duty, totally enclosed, gear-in-head motor, model M-100 automatic cutoff machine cuts ferrous metals with an abrasive wheel and nonferrous metals with a saw blade. Tolerances are held to ±0.010-in. on production runs. An automatic stock feed accommodates a wide range of shapes, lengths and diameters. An abrasive wheel wear compensator automatically adjusts for rapid, accurate cutting. Also available are a 15-hp motor and manual and semi-automatic machines. Made by **Stone Machinery Co.**, 833 Fayette St., Manlius, N. Y.

For more details circle NED-436 G7 on enclosed inquiry slip

Work-O-Matic* Box and Stand for

UNIT LOAD HANDLING AND WORK-LEVEL POSITIONING

Check these 7 Work-O-Matic features

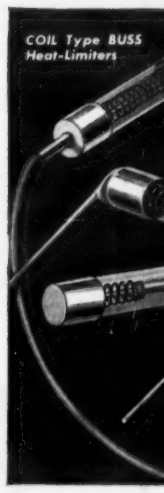
1. **WORK-O-MATIC DROP BOTTOM BOX.** Heavy gauge corrugated steel construction. Square corners.
2. **CORNER STACKING ANGLES.** Safe tiering without shifting. Saves floor space.
3. **HINGED CHUTE BOTTOM.** As forks of truck are lowered, hinged bottom opens and parts slide into tray.
4. **WORK POSITIONING STAND.** Receives box from back or sides. Safely and easily transported by lift truck.
5. **CONTROL GATE.** Vertical adjustment controls flow of parts into tray.
6. **WORK-LEVEL TRAY.** Reservoir feature eliminates work stoppage when changing boxes.
7. **INCLINED TRAY END.** Assures parts accessibility. Speeds job changes.

In addition, Union Metal offers industry's broadest line of conventional type material handling containers. Write for complete catalog information. Address The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL
Material Handling Equipment

For more details circle NED-437 G7

If overheating can cause BUSS Heat-Limiters may answer your problem!



Many types of electrical devices or apparatus can now be protected against excessive overheating creating a hazard or resulting in loss of material.

Properly installed, a BUSS Heat-Limiter will open the circuit if anything causes the temperature at the thermal cut-out of the Heat-Limiter to rise above its opening point. The ability of BUSS Heat-Limiters to do this may be the answer to your overheating problem.

Where used: BUSS Heat-Limiters can be installed in the heater element circuit —or if the heater current is controlled by a contactor they can be installed in the relay circuit.

BUSS Heat-Limiters are available in many types and in many styles of terminals to suit requirement. Tell us your problem and let
neers help you s
For more infor
Bussmann Mf
McGraw-Edison
University, St. L

For more details circle NED-438 G7

V

EVERY TYPE—EV
Ball Bearin
Cylindrical Roller
Spherical Roller Be
Tapered Roller Be

SKF
SKF INDUSTRIES, INC., PHILADEL

For more details circle NED-439 G7

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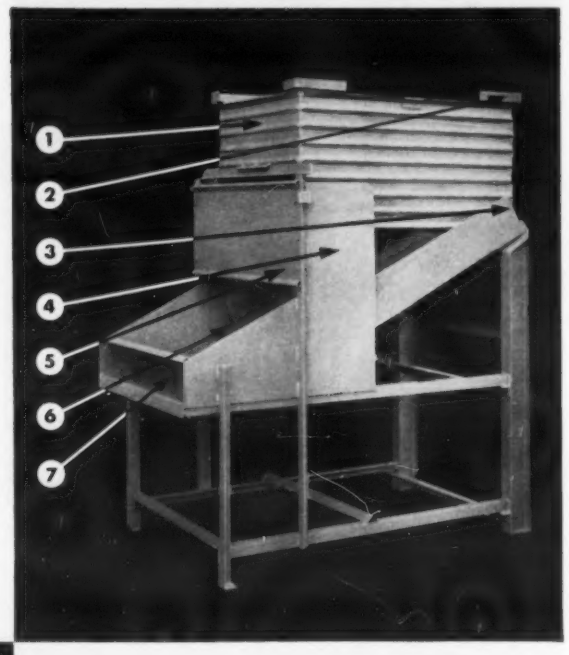

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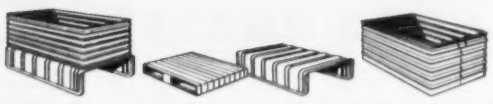
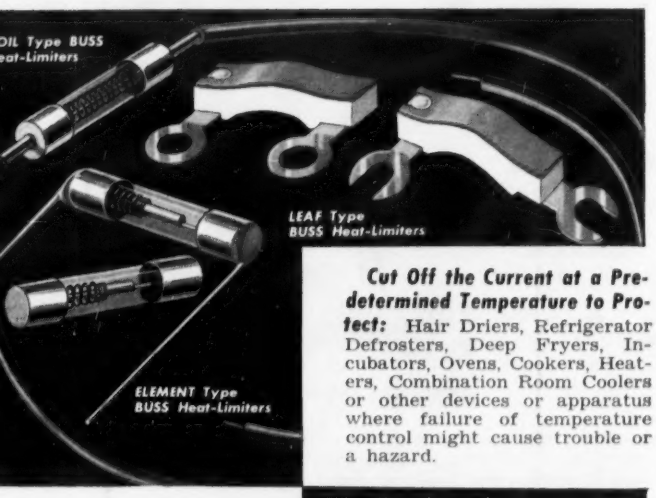


*Patent No. 2,445,038

cle NED-437 G7 on enclosed inquiry slip ▲

ause trouble or danger . .



Cut Off the Current at a Predetermined Temperature to Protect: Hair Driers, Refrigerator Defrosters, Deep Fryers, Incubators, Ovens, Cookers, Heaters, Combination Room Coolers or other devices or apparatus where failure of temperature control might cause trouble or a hazard.

BUSS *Safety-Valve*
HEAT LIMITERS

Another outstanding development by the makers of **BUSS FUSES**

lem and let BUSS engi-
s help you solve it.
or more information write,
smann Mfg. Division
raw-Edison Co., 2632 W.
versity, St. Louis 7, Mo.

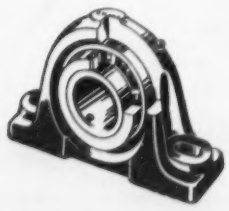
cle NED-438 G7 on enclosed inquiry slip ▲

Vacation time

From bearing failures take a vacation
Use SY-FY†, the mounting sensation
Their famous Red Seal with DuPont's Fairprene
Retains lubricant, keeps bearings clean.

Special features for easy installation
And an Alemite fitting for re-lubrication
You can replace all mountings of similar design
See the distributor with **SKF**'s line. 7747

† Unit pillow blocks and flanged mountings



RY TYPE—EVERY USE
ll Bearings
lindrical Roller Bearings
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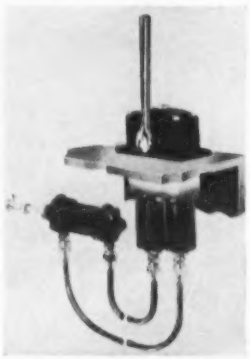
pered Roller Bearings ("Tyson")
U.S. Pat. Off. Tyson Bearing Corporation
IC., PHILADELPHIA 32, PA.
rcle NED-439 G7 on enclosed inquiry slip ▲

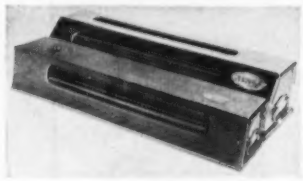
HYDRAULIC REMOTE CONTROL
has positive two-direction stroke



Self-contained Crown Hydra-Trol remote control accurately positions remote shafts, levers and other equipment. It has positive stroke in both directions, assuring immediate synchronization of the hydraulic control system in either direction. Applications include controlling hydraulic valves, winches, throttles, slitting machine and butterfly valves. Control comprises a master cylinder and a slave cylinder assembly connected by 3/8-in. OD tubing. Capacity is 200 lb force through 2 in. of stroke at the slave rod, equal to 400 lb-in. torque through 60 degrees travel. Made by **Trimont Instrument Co.,** Crown Controls Div., 3119-21 W. Lake St., Chicago 12, Ill.

▲ For more details circle **NED-440 G7** on enclosed inquiry slip ▲

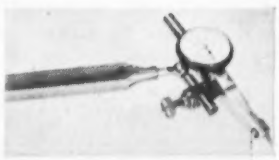
PHOTOCOPY OUTFIT
consists of printer and processor



Photocopies up to 20 in. wide by any length are made by the Exact-Fax Duo photocopy outfit. It consists of a 6 x 9 x 30-in. automatic continuous printer, a 29-lb unit with shutter type light control, and an automatic continuous processor measuring 6 x 7 x 30-in. and weighing 25 lb. Both are stainless steel covered and fit together to give the appearance of one machine. Outfit operates under all normal office and factory light conditions, making from 60 to 90 copies per hour. One and two sided copies and reproductions from all colors can be made. Two units are sold separately for $250 and $225, respectively, or together for $450. Made by **General Photo Products Co.,** Dept. NED, General Photo Bldg., Chatham, N. J.

▲ For more details circle **NED-441 G7** on enclosed inquiry slip ▲

DIAL TEST INDICATOR
has 0.030-in. range

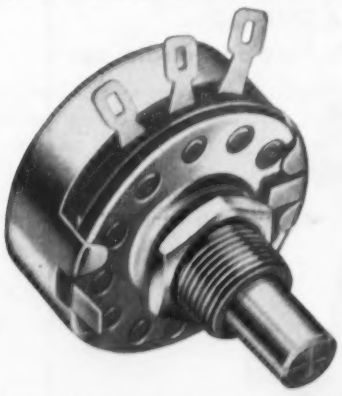


A 1/4-in. spigot, as well as the side clamping holder, allows unlimited positioning of the model C dial test indicator. Other features include rotatable bezel, reversing lever and ratchet contact point. The 1-in. dial, calibrated in 0.001-in. graduations, has a 0.030-in. range. Satin-chrome finished instrument sells for $12.95. Available from **Transocean Trading Co.,** Dept. NE, 6453 Santa Monica Blvd., Los Angeles 38, Calif.

▲ For more details circle **NED-442 G7** on enclosed inquiry slip ▲

VARIABLE RESISTOR
withstands up to 150° C ambients

Only 1 in. in diameter, type K hot-molded composition variable resistor is rated 2 w under 100° C ambient operating conditions and will perform reliably at 150° C under no-load conditions. It is rated at 3 w for 70° C ambients. Solid composition resistor element, terminals, insulation, faceplate and threaded bushing are all hot molded in one-piece plastic body, making the resistor impervious to effects of heat, cold, moisture and aging. Resistors are available in standard U, A, B, S and DB resistance rotation characteristic tapers in values up to 5.0 megohms total resistance. They can be single, dual and triple units with plain bushings or lock bushings. Shafts can be plain, flatted or slotted in increments of 1/8-in. up to 6 in. Made by **Allen-Bradley Co.,** 1334 S. Second St., Milwaukee 4, Wis.



▲ For more details circle **NED-443 G7** on enclosed inquiry slip ▲

Tempilstiks°
FOR ALL HEAT-DEPENDENT OPERATIONS . . .

looks like a crayon
marks like a crayon
tells temperatures like
a precision instrument

Sixty-three different compositions enable you to determine and control working temperatures from 113° to 2000°F. TEMPILSTIK° marks on workpiece "say when" by melting at stated temperatures — plus or minus 1%.
Also available in liquid and pellet form . . . Write **Advertising Division** for sample TEMPIL° pellets. . . State temperatures of interest — please!

Tempil°
CORPORATION
132 WEST 22nd STREET, NEW YORK 11, N. Y.

▲ For more details circle **NED-444 G7** on enclosed inquiry slip ▲

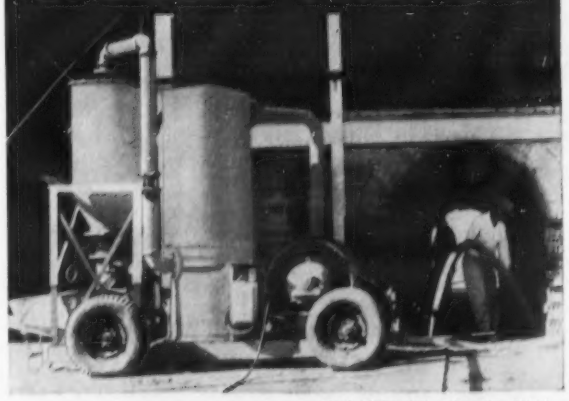
cooler cutting gives
longer disc life

Gardner Abrasive Discs
lower your grinding costs
Send for latest general catalog

GARDNER
abrasive discs
GARDNER MACHINE COMPANY
462 Gardner St.
Beloit, Wisconsin

▲ For more details circle **NED-445 G7** on enclosed inquiry slip ▲

SPENCER VACUUM



ACME BRICK CO., BENNETT, TEXAS

Handles King-Size Cleaning Task

Removing hot brick chips and sand is the job handled by this rugged SPENCER portable vacuum cleaner.
It's typical of the tough assignments regularly entrusted to sturdy SPENCER vacuum cleaners when continuous, reliable performance is a *must*.
Whatever *your* requirements in portable vacuum cleaners from 7/8 HP through 20 HP or pneumatic conveying systems from 2 HP through 100 HP and capacities to 10 Tons per hour, it will pay you to contact SPENCER.

SPENCER
The SPENCER TURBINE CO.
HARTFORD 6, CONNECTICUT

▲ For more details circle **NED-446 G7** on enclosed inquiry slip ▲

Need a box for small parts?

TOTELINE of MOLDED FIBER GLASS

472 with molded-in handles # 500 stacking box

Here are just two—specially designed for handling small parts—of the large line of Toteline fiberglass stacking boxes. All Toteline boxes and trays offer these advantages:

- Light but strong
- Easy to clean
- Chemical resistant
- No maintenance
- No sharp edges, corners
- Constant tare
- Wire reinforced edges
- Available in colors

Write for catalogs or describe your specific handling problem.

MOLDED FIBER GLASS TRAY CO.
LINESVILLE, PA. Offices in principal cities and Canada
World's largest producer of reinforced plastic trays and toteboxes

For more details circle NED-447 G7 on enclosed inquiry slip

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if

IF larger motor is necessary to start machine than required to run it.

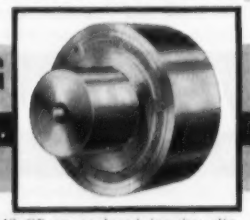
If special motors or controls are used because of heating problems due to frequent starting or long starting periods because of high WR^2.

If shock start will break mechanism or work and a softer start is required.

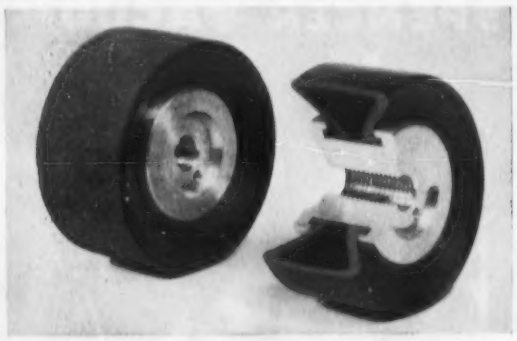
If dual drive with automatic coupling of standby prime mover is required.

IF your answer is yes to any of these questions you need a RAWSON COUPLING, the centrifugal clutch that is as "simple as a handshake." Remember: Starting a load with the new RAWSON is like starting a motor without any load.

RAWSON COUPLING DIVISION
O. S. WALKER CO., Inc.
WORCESTER, MASS.



For more details circle NED-448 G7 on enclosed inquiry slip



NU-MATIC ANNOUNCES NEW PRINCIPLE IN INFLATED GRINDING WHEELS

The new "Aircore" design consists of only TWO parts . . . the drum and the core. And, it is SELF SEALING . . . as the hollow rubber drum is inflated it automatically makes positive, leak-proof contact with the metal core.

Check these PLUS features:

PRECISION OPERATION. Wheel always runs true because rubber drum seats on accurately machined ledge of core. Vibration-free operation.

FEWER PARTS TO STOCK AND MAINTAIN. No nuts, bolts or sideplates.

TROUBLE-FREE CORE. Made of machined aluminum. Can't break, crack or leak. Will last a lifetime.

Three models are available: 3" diameter x 2" width, 4" diameter x 2" width, 5" diameter x 3½" width.

WRITE FOR COMPLETE SPECIFICATIONS. Also, ask about Nu-Matic's new "Flexcore" . . . an expanding-type grinding wheel with replaceable rubber segments.

NU-MATIC GRINDERS, INC.
8224 Carnegie Ave. Cleveland 3, Ohio

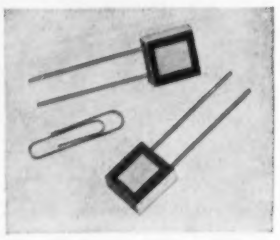
For more details circle NED-449 G7 on enclosed inquiry slip

TIME SWITCHES
handle heavy inrush lighting loads

Momentary inrush surge of more than eight times their normal amperage rating can be handled by Intermatic tungsten-rated time switches. Units are especially designed to handle heavy-duty incandescent lighting loads. Models include standard on-off, Skipper and short interval (5 to 60 minute) switches. The Alloy-T contacts resist pitting, arcing and sticking, and spring brass U-beam blades, channeled for rigidity, eliminate blade bounce. Black-on-yellow dial, heavy-duty synchronous timing motor, five ½-¾-in. knockouts, snap-out mechanism, heavy-duty terminals and manual control with automatic reset are features. Made by **International Register Co.**, 2624 W. Washington Blvd., Chicago 6, Ill.

For more details circle NED-450 G7 on enclosed inquiry slip

MINIATURE PHOTOCELL
operates ac or dc relays directly



Primary use of the Powermaster photocell is direct operation of alternating or direct current relays, as well as electronic trigger circuits at 1000 counts per second. Encapsulated in resin, unit is rated 120 v ac or dc. Photosensitivity is independent of temperature from 0 to 175° F. Unit operates as a nonpolar variable resistor, and the lowest sensitivity photocell will pass 10 ma at 22.5 v at 50 foot candles. Dark resistance is over 1 megohm. Maximum sensitivity is to blue green light at 5100 Angstroms. Unit measures ⅝ x 9/16 x ¼ in. and has 1½-in. leads. Made by **Hupp Electronics Co.**, 749 Circle Ave., Forest Park, Ill.

For more details circle NED-451 G7 on enclosed inquiry slip

AISLE MARKERS
for use in wood block floors

Heat, oil, acid or heavy foot or vehicular traffic will not damage Permanent-Line impregnated glass fiber aisle markers, developed for permanent use in cre-

osoted wood block floors. They are self-cleaning, require no upkeep and can be supplied in red, yellow, white or any other color. Sizes are 3 x 6 in. and 4 x 6 in., with depth to specification. Made by **Hayden-Shaw Mineral Products**, 7814 W. Jefferson, Detroit 17, Mich.

For more details circle NED-452 G7 on enclosed inquiry slip

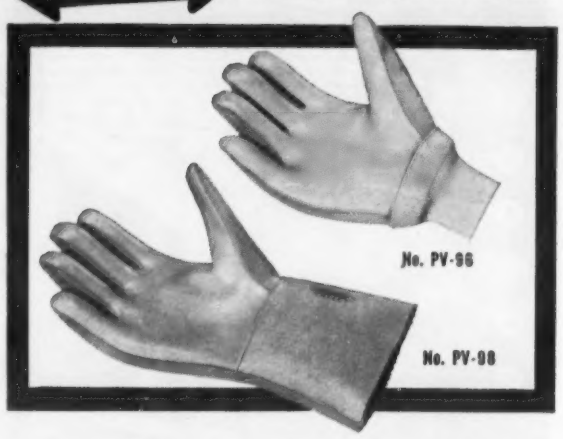
INSPECTION MAGNIFIER
leaves hands free to handle parts

Worn on the person, this model 0.185 Hands-Free magnifier leaves hands free to manipulate parts under inspection, or to do other fine work. Magnifier has a 3⅞-in. double convex lens which is set in an adjustable clear plastic hanger. It is attached by plastic cord around the neck where it can be adjusted to any height for best operation. Unit weighs less than 6 oz and sells for $5.95. Made by **Pacific Transducer Corp.**, 11836 W. Pico Blvd., Los Angeles 64, Calif.

For more details circle NED-453 G7 on enclosed inquiry slip

Tough as they come!

HOOD Plastic-Coated Gloves



Super-resistant to acids, alkalies, oils and abrasion. Flexible and odorless. Curved fingers and winged thumb provide natural, comfortable fit. Canton flannel lining.

Also available in palm coated style No. PV-94.
Write for 1957 catalog.

HOOD RUBBER CO.,
a division of the B. F. Goodrich Company
WATERTOWN, MASS.

RUBBER • NEOPRENE • PLASTIC COATED INDUSTRIAL GLOVES

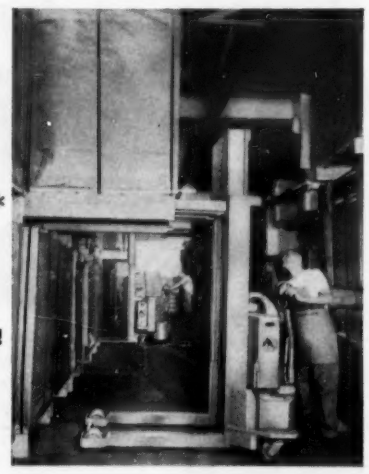
For more details circle NED-454 G7 on enclosed inquiry slip

L-S ELECTRICS FOR LIFT TRUCK SAVINGS

only $2.82 A DAY*

TO OWN, OPERATE, AND MAINTAIN!

Reports
Berkshire Papers, Inc.
Chicago, Illinois



Narrow-aisle, high-tiering L-S JackStacker "Walkie" Electrics have cut space and stock handling costs *in half* at Berkshire Papers. But even more amazing, each L-S JackStacker costs Berkshire *only $2.82 a day to own, operate, and maintain.*

L-S JackStacker is ideal for warehouse work. Right angle stacks 48" loads in aisles less than 6' wide. Lift heights to 180". Capacities to 6000 lbs. Write to:

L-S **LEWIS-SHEPARD®**
The most complete line of materials handling equipment anywhere

*Based on 5-year average of equipment, operating, and maintenance cost

The "MASTER" Line 177 Walnut St., Watertown 72, Mass.

For more details circle NED-455 G7 on enclosed inquiry slip

The Metron 3 in 1 HAND TACHOMETER...

The most **CONVENIENT**
most **ACCURATE**
most **READABLE**

WAY TO MEASURE SPEEDS OF YOUR MACHINES

3 sliding-scale ranges in 1 instrument!

It's more *readable*—you see only one set of scale numbers at a time. It's more *dependable*—has a simpler operating principle. You switch quickly to any of 3 "sliding scale" ranges. You cannot damage by overspeeding. You get steady readings—electric cable prevents instrument vibration.

For full details write for bulletin 103

Metron INSTRUMENT COMPANY
436 Lincoln St., Denver 3, Colo.
DISTRICT OFFICES • NEW YORK • CHICAGO • CLEVELAND

For more details circle NED-456 G7 on enclosed inquiry slip

Signode ball-top table speeds strapping...simplifies handling

Put Signode ball-top tables in your packaging lines and watch output rise! These handy tables enable a worker to handle and strap heavy containers with greater ease and less fatigue. They are ideal, too, for use at independent strapping stations scattered throughout your plant. Use with other Signode high-speed strapping equipment to make your products cost less to handle, strap and ship. Write for details and prices.

SIGNODE STEEL STRAPPING CO.
2643 N. Western Avenue, Chicago 47, Illinois
Offices coast to coast.
Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

For more details circle NED-457 G7 on enclosed inquiry slip

Now! Another NEW "HATFUL OF SAFETY" by FIBRE-METAL

SuperLite™ ALUMINUM SAFETY HAT

SuperLite Hat "shells" are of tough aluminum alloy, tempered and ribbed for maximum resistance to blows from flying or falling objects. *SuperLite's* exclusive Polyethylene suspension gives maximum shock absorption and unmatched comfort. It is *and remains* flexible, conforms to head shape, and is deep fitting to "stay put" in any working position.

TOUGH... ribbed crown for highest impact resistance. ● COOL... reflects, does not absorb heat. Well ventilated. ● COMFORTABLE... men prefer and LIKE to wear SuperLite! ● ONE SIZE FITS ALL HEAD SIZES. ● NO LACING... exclusive design! Only headband ever needs replacing... a big saving! TOPS IN HYGIENE... easily sterilized. Waterproof. NON-TOXIC... mildew- and fungus-proof Polyethylene suspension. No deterioration. ● FULLY TESTED... to exceed highest safety standards. ● LIGHT-WEIGHT... trim and good looking.

NO METAL PARTS in Hat Suspension

Write for Bulletin No. 55 — The FIBRE-METAL Products Company | CHESTER PENNA.

THE WORLD'S LARGEST MANUFACTURER OF SUPERIOR PROTECTIVE EQUIPMENT

For more details circle NED-458 G7 on enclosed inquiry slip

30 day free trial in your plant with new, low-cost **hydraulic MULTIPRESS.**

You can put this versatile low-cost 1-ton hydraulic Multipress to work on your own press jobs now . . . on a 30-day free trial.

Multipress gives you dependable production, lower tooling costs, faster time cycle, safe operation with interlocked controls, easy installation, for only $395 . . . f.o.b. factory.

Use it for 101 different operations . . . for small lot or volume production.

For complete details, write:

DENISON ENGINEERING DIVISION
AMERICAN BRAKE SHOE CO. • COLUMBUS 16, OHIO

For more details circle NED-459 G7 on enclosed inquiry slip

INSTRUMENT VALVES
rated at 2500 psi at 850° F

Long wearing integral seat insert of chrome-cobalt-tungsten alloy (arrow in photo) is combined with welding advantages of carbon steel in this line of instrument valves. Carbon steel body can be welded into carbon steel pipelines. Screwed ends are also available. Rated at 2500 psi at 850° F, they feature drop forged bodies and yokes and swing bolted glands for easy repacking. Precise flow control is provided by a tapered needle point stem disk and fine pitch screw threads. Made by **Edward Valves, Inc.**, 1240 W. 144th St., East Chicago, Ind.

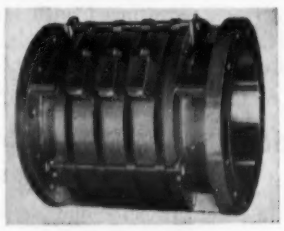
For more details circle NED-460 G7 on enclosed inquiry slip

PLASTIC GRANULATORS
for all thermoplastic materials

Hot and cold sprues of all thermoplastic materials, including elastomerics, can be fed simultaneously into the Marvel M-75 granulator. It has a 75-lb per hour capacity, sliding bin, double-shear knife action and an 8 x 6-in. throat opening to accommodate rejects, sprues and runners. Hopper tray height is 38 in. Opening of two hand clamps detaches the hopper and screen to expose the interior for cleaning. Machine is designed for beside-the-press use. A ¾-hp motor and casters are included. Made by **Ball & Jewell, Inc.**, 24 Franklyn St., Brooklyn 22, N. Y.

For more details circle NED-461 G7 on enclosed inquiry slip

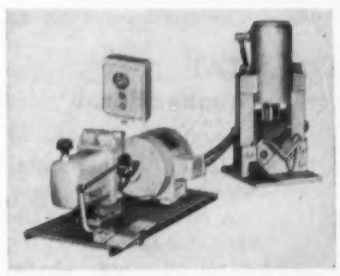
EXPANSION JOINTS
improved self-equalizing type



Improved corrugated self-equalizing expansion joints for power and process piping systems feature longer life plus reductions in length and weight. Joints protect piping and related equipment against damage due to temperature change. They employ equalizing rings to distribute pipe line expansion equally to all corrugations. Rings also support the roots of the corrugations against internal pressure, permitting the use of thinner metal in the bellows. Made of stainless steel, joints are offered in 3 to 72-in. diameters, in single or double units. They are used for pressures up to 300 psi and up to 1600° F. Copper units are offered in 3 to 24-in. diameters and operate at up to 125 psi and 406° F. Made by **Zallea Brothers**, 818 Locust St., Wilmington 99, Del.

For more details circle NED-462 G7 on enclosed inquiry slip

ANGLE IRON SHEAR
hydraulic unit cycles in 6 seconds



Blade of this hydraulically operated angle iron shear can be lowered, stopped, or raised at will. Shear is operated by a foot treadle and a two-way selector valve and is used with a No. 95 hydraulic press. Cycle time is 6 seconds with a 3-hp motor. Capacity is 4 x 4 x ¼-in. angle iron, ⅜ x 3½-in. flat, ⅝-in. round, or 1-in. hollow square tubing with the angle iron shear blades. Additional blades are available for shearing 5/16 x 6-in. flat stock. Bending dies form right angle bends in round and square, or up to ⅜ x 6-in. flat stock. Dies and inserts are also offered for shearing various sizes of channel iron. Made by **W. A. Whitney Mfg. Co.**, 644 Race St., Rockford, Ill.

For more details circle NED-463 G7 on enclosed inquiry slip

HERE'S THE MOST COMPLETE NOZZLE CATALOG EVER PUBLISHED

Whatever your nozzle problem, look first in this new catalog by Spraco. Here is complete information on a wide range of nozzle types and sizes as well as general spraying coverage data.

Send for your **FREE** *copy today . . .*

SPRAY
Engineering Company
106 Central Street, Somerville 45, Mass.

For more details circle NED-464 G7 on enclosed inquiry slip

UNION

Here's the "HOTTEST" AC Relay on the market—

New High-Temperature UNION AC Relay rated from —65°C. to 125°C., 115 Volt, 60 to 400 Cycles. Suitable for airborne circuits including jet planes and missiles.

Miniature relay applications are getting hotter all the time—and many of them call for self-contained AC relays.

To meet these needs, UNION has developed AC relays incorporating silicon rectifier assemblies. They'll withstand temperatures from —65° C. to 125° C. The size is the same as the 85° C. UNION AC Relay.

NEW HI-LOW CONTACTS, too! These contacts permit switching loads of two amperes or dry-circuitry level in the one relay. Or, you can get gold alloy contacts for dry-circuitry use.

OTHER ADVANTAGES

Vibration resistance up to 1,000 cycles at 15 G's and shock in excess of 50 G's.

Life expectancy. Tested through 1,000,000 operations.

Coil resistance. 3,700 ohms.

Small size, Lightweight. Measures only ½" higher than our DC relays and weighs about 5 oz. All other construction features are the same as the DC relay.

Types and Mountings. Available in 6 PDT or 4 PDT models, plug-in or solder-lug connections and all the usual mountings.

Meets or exceeds all requirements of MIL-R-5757-C, MIL-R-25018, and MIL-R-6106B.

Write for complete information. Ask for Bulletin 1012.

UNION SWITCH & SIGNAL
DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY
PITTSBURGH 18, PENNSYLVANIA

For more details circle NED-465 G7 on enclosed inquiry slip

AIR-POWERED Rotary WORK FEEDER

Adjustable for 4, 6, 8, 12 or 24 Feeding Stations

Dial feed work pieces to drill presses, punch presses and other tools. Cut cost in half. Bellows Rotary Feed Tables are air-powered, electrically controlled for easy interlock with drill press spindles or press rams. All valves and controls are built-in. Ten inch diameter table top can be machined for mounting jigs and fixtures.

Write for Bulletin RT-1022. Address Dept. NED-757.

The Bellows Co.
AKRON 9, OHIO

▲ For more details circle **NED-466 G7** on enclosed inquiry slip ▲

Compare! No Other Lift Truck can equal the performance of Automatic's New "DOCKER"

✓ **Shortest, most compact truck in its class!**

✓ **Lowest step height—best grade clearance!**

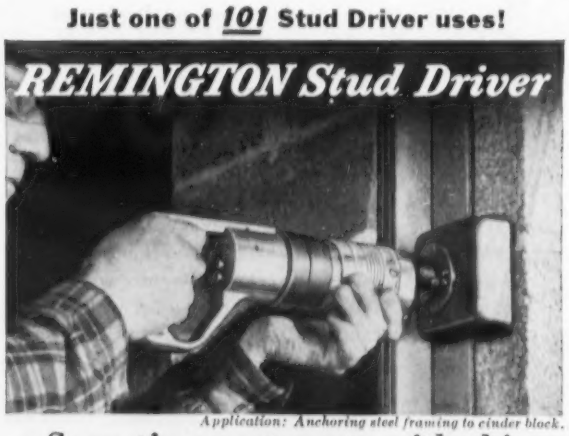
✓ **Top lift and travel speeds, maximum stability!**

Best performing truck on the market for the trucking industry and other close-quarter materials handling, the new "Docker" is 5 ways superior! Overall length (less fork) of 53 ⅞" • step height of only 7" • lift speed of 65 FPM • grade clearance of 45% • turning radius of 56". *No other* truck of its type offers so much! The "Docker" provides greater stability, too, through 4-wheel suspension and a lower center of gravity. It is available in Mono-Lift or Duo-Lift, 1,000 to 3,000 lbs. capacities.

Automatic
WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS
61 W. 87th St., Dept. K-7, Chicago 20, Illinois

▲ For more details circle **NED-467 G7** on enclosed inquiry slip ▲

Just one of *101* Stud Driver uses!



Application: Anchoring steel framing to cinder block.

Save time, cut costs with this cartridge-powered fastening tool

Here's the tool that sets *six* ¼" or ⅜" diameter fastening studs a minute in steel or concrete—with just a squeeze of the trigger! No pre-drilling, no outside power source required. Change barrels in 90 seconds, *right on the job*. Over 40 Remington Studs to choose from, plus scientifically graded 22 and 32 caliber Power Loads to do the work!

Free Booklet shows how you can save with the Stud Driver. Mail reader service card.

Remington DU PONT

Industrial Sales Division, Dept. NED7 Remington Arms Company, Inc., Bridgeport 7, Conn.

▲ For more details circle **NED-468 G7** on enclosed inquiry slip ▲

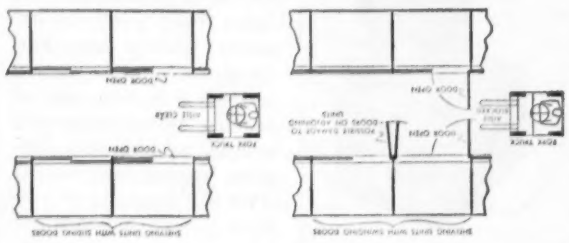
SPRAY PAINTING MACHINE
automatic pressure contact type

Production decorating of small parts is speeded by this automatic pressure contact spray painting machine, a self-contained air-operated unit. Use of a duplicate rotary mask-holding plate during washing minimizes machine down time. Machine has atomizing and machine air regulators and gages and an air timer device. Exactly the same amount of paint is applied to every piece. An adjustable mount accommodates one or two guns. Installation requires only attachment to an exhaust system, compressed air line and paint pressure tank. Made by **Conforming Matrix Corp.**, 338 Toledo Factories Bldg., Toledo 2, O.

▲ For more details circle **NED-469 G7** on enclosed inquiry slip ▲

SLIDING-DOOR SHOP EQUIPMENT
steel shelving, cabinet accessory conserves up to 3 ft of aisle space

Available as standard accessory for the Hallowell line of steel shelving and cabinets for industrial plant and warehouse use, line of sliding doors affords sav-



ings of up to 3 ft of aisle space. They eliminate bumping hazards and minimize damage often incurred when swinging doors are hit by lift trucks or people walking by. Frequently, two sliding doors can replace four swinging type.

Nylon rollers and guides reduce noise and eliminate the need for oiling and other maintenance, and rubber bumpers further minimize noise. Sliding doors are available in 30 to 96-in. widths and 36 to 84-in. heights. All can be ordered with locks master-keyed to other Hallowell equipment. Made by **Standard Pressed Steel Co.**, Box 581, Jenkintown, Pa.

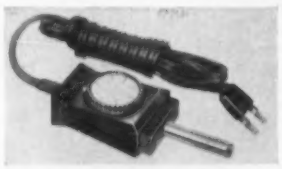
▲ For more details circle **NED-470 G7** on enclosed inquiry slip ▲

SPRAY PAINT AGITATOR
siphon cup mixes, prevents settling

Off-color rejects due to settling out of paint when spray equipment is not in use are prevented by an air-driven agitator siphon cup. Suited for use with OA or Lucite lacquers, it thoroughly blends paint materials in small batch mixing of colors and touch-up work. While spraying, operation is identical to the standard siphon cup. Agitator is powered by an air-operated variable speed drive unit which actuates paddles inside the 1 or 5-qt cup. Made by **Binks Mfg. Co.**, Dept. NED, 3122 Carroll Ave., Chicago 12, Ill.

▲ For more details circle **NED-471 G7** on enclosed inquiry slip ▲

PROBE TYPE THERMOSTAT
also has electrical connection



Metal shaft or probe of the UniProbe thermostat assembly relays heat from an appliance to the adjustable thermostat for control purposes. A female receptacle for electrically energizing the appliance is also built into the plastic-housed unit. It is on the end of a 6-ft, 1650-W cord and offers heat control to 450° F. A light signals when current is on. Unit lowers appliance cost as one thermostat unit is required for several appliances. It also permits immersion of appliance for washing. Made by **Pace, Inc.**, 583 Wayne St., Mansfield, O.

▲ For more details circle **NED-472 G7** on enclosed inquiry slip ▲

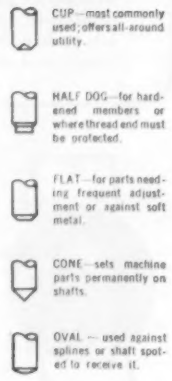
SOCKET SET SCREWS . . . FAST!

Expanded Cleveland line includes #0 to 1 in. diam., 5 different point styles

Cleveland now provides one source for fast service on all your socket set screw requirements – cup, half dog, flat, cone or oval points in heat treated alloy steel from #0 to 1 in. diam. (#0-#3, cup point only). 18-8 stainless is also available in standard cup point sizes from #0 to ½ in.

Cleveland socket set screws have deep, precision formed sockets for non-slip high-torque wrenching and greater holding power. Threads are cold rolled for high-strength grain structure.

Write for technical data and prices



THE CLEVELAND CAP SCREW COMPANY
4444-18 Lee Road, Cleveland 28, Ohio
WAREHOUSES: Chicago • Philadelphia • New York • Los Angeles

▲ For more details circle **NED-473 G7** on enclosed inquiry slip ▲

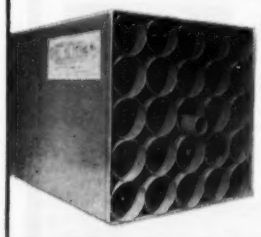
AN ORDERLY SYSTEM
FOR FILING • STORING • SEGREGATING

TRACINGS • BLUE PRINTS
SHEET MATERIAL
ENGINEERS • ARCHITECTS
DRAFTSMEN
BUILDERS
PAT. APPLIED FOR

49 TUBE Model 1¾" I. D.

Model	49AB	49CD	4930	4936	4942
Depth	11¼"	22¼"	30½"	36½"	42½"
Ship. Wt.	8 lb.	14 lb.	16 lb.	19 lb.	22 lb.
Price	$6.25	$8.35	$10.85	$11.95	$12.85

FILE constructed in 200-lb.-test Corrugated Board Container.



25 TUBE Model 2½" I.D.

Model	2530	2536	2542
Depth	30½"	36½"	42½"
Ship Wt.	13 lb.	16 lb.	19 lb.
Price	$10.85	$11.95	$12.85

F.O.B. FRASER, MICHIGAN
Enameled Dark Green or Medium Gray. State color.
BUY DIRECT—NO DEALERS

ROLL & FILE SYSTEMS, INC. • P. O. BOX 3863, DETROIT 5, MICH.

▲ For more details circle **NED-474 G7** on enclosed inquiry slip ▲

YOUR CYLINDER ORDER SHIPPED IN *24* HOURS OR LESS!
—LET CARTER CARRY YOUR INVENTORY!

CARTER
CYLINDERS

AIR OR HYDRAULIC
ANY MOUNT
ANY STROKE
ANY BORE SIZE

Get your cylinders *now*. No need to lose production! Carter will *ship your cylinder order in 24 hours or less*, to satisfy your needs. And when you buy Carter cylinders, you buy quality—rugged, dependable cylinders.

Leakproof construction . . . strong key-type locking of body between tubing and heads . . . compact, space-saving design . . . *plus special delivery to you*. Get in touch with us *today* for cylinders you need *tomorrow!*

CATALOG FILE! Air Cylinders; 750 lb. Hydraulic; 1500 lb. Hydraulic; Clamp Cylinders; Air Valves; Built-in Valve Types. Complete with parts data, specifications and prices. Send today!

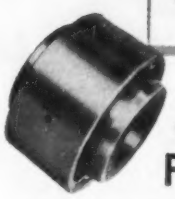
24 HOUR PHONE SERVICE
For fast service call CARTER: LANSING, ILLINOIS, GRanite 4-3305 or CHICAGO, BAyport 1-7186. TELETYPE LNSG. ILL 1119X.

CARTER CONTROLS INCORPORATED
2876 Bernice Road, Lansing, Illinois
(Chicago Suburb)

AIR CYLINDERS • AIR VALVES • HYDRAULIC CYLINDERS
ROTARY ACTUATORS • SPECIAL CONTROLS

▲ For more details circle **NED-475 G7** on enclosed inquiry slip ▲

RUNS FASTER!
ASSEMBLES EASIER!
COSTS LESS! than other types of couplings



Sier-Bath
FLEXIBLE GEAR COUPLINGS

Because they're smaller and lighter than conventional couplings, Sier-Bath Flexible Gear Couplings have lower moments of inertia. This means reduced bending stresses; less overheating and bearing wear and lack of resistance to motor drift. They run at higher rpm, have greater horsepower capacity! Chrome vanadium snap rings eliminate bolts, save time in coupling and uncoupling, eliminate "freeze-up" even after years of service. Best of all, costs average 21% below other brands.

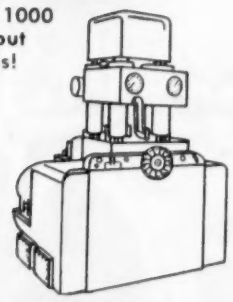
Deliveries from stock on most types and sizes. Send today for Catalog C-4

Simpler! only 7 parts
Smaller and Lighter! ⅗ Usual Size ½ Usual Weight

Sier-Bath
GEAR AND PUMP CO., INC.
9242 Hudson Blvd., North Bergen, N. J.
Founded 1905 Member A. G. M. A.

For more details circle NED-476 G7 on enclosed inquiry slip

PROTECTED
GORTITE
SLEEVES
1 or 1000 without molds!



ASK FOR NEW bulletin AH-3.

For drill and grinder spindles, press rams, piston rods and all similar uses. No size limitations.

A&A Mfg. Company Inc.
712 S. 12th Street • Milwaukee 4, Wis.

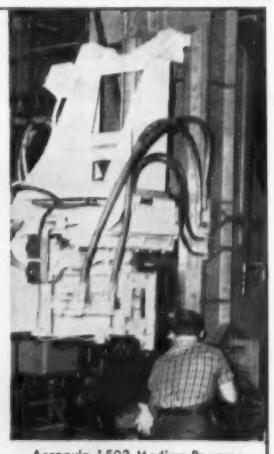
For more details circle NED-477 G7 on enclosed inquiry slip

"Aeroquip Hose with Reusable Fittings makes Replacement Quick and Easy"

Reports Ed. Reine, Whirlpool-Seeger Corp.

When replacement hose lines are needed on the four automatic resistance welders at the company's Evansville, Ind. refrigerator plant, Whirlpool-Seeger maintenance personnel save time by using Aeroquip Bulk Hose and Reusable Fittings. Only bench tools are needed to make new assemblies.

Quick replacement is *just* one of the many advantages of Aeroquip Flexible Hose Lines. Learn about their dependability and durability from your Aeroquip Distributor listed in the Yellow Page Phone Book. Or write us.



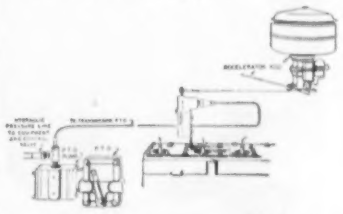
Aeroquip 1503 Medium Pressure Hose is used for hydraulic and lube oil lines on this welder. Because it is flexible, Aeroquip Hose installs quickly and easily, withstands vibration.

Aeroquip
AEROQUIP CORPORATION, JACKSON, MICHIGAN
IN CANADA: AEROQUIP (CANADA) LTD., TORONTO 10, ONTARIO
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A., CANADA AND ABROAD

For more details circle NED-478 G7 on enclosed inquiry slip

THROTTLE CONTROL
for power take-off equipment

Hydro-Throttle control is easily installed on any engine used in power take-off equipment and gives exact throttling speed necessary for proper load lifting. It eliminates setting engines ahead, saves clutch wear and fuel consumption and adjusts quickly to work with any hydraulic pressure system. Control is 5 in. long and weighs 1½ lb. It needs no lubrication or spring changes for continuous operation. As pressure increases to lift a load, piston is forced into action to increase engine speed. As load is stopped, or pressure is reduced, throttle instantly returns engine to idling speed. Made by **Stratton Equipment Co.**, Dept. AA, 2030 E. 105th St., Cleveland 6, O.



For more details circle NED-479 G7 on enclosed inquiry slip

ELECTRONIC SENSING CONTROL
checks metal object size, position

Detecting the correct position or size of ferrous or nonferrous objects without contacting them is function of the SCI 400 electronic capacitance control. Instrument not only recognizes an error or deviation from a preset constant, but also indicates whether sensed object is too far from, or too near to, a predetermined position or setting. Control then stops machine, rejects the object, or actuates correcting mechanisms. Sensing element is surrounded by insulator materials and is unaffected by vibration, dirt or abusive use. It will detect objects up to 2 in. away and, at close proximity, can recognize deviations of 1/16-in. Made by **Security Controls, Inc.**, 256 Franklin St., Buffalo 2, N. Y.

For more details circle NED-480 G7 on enclosed inquiry slip

RIGHT ANGLE GEARMOTORS
line includes ¼ to 5 hp units

Line of right angle gearmotors includes ¼ through 5-hp units in all enclosures. Units have aluminum alloy gear case and motor housings, bronze worm wheel and high-carbon steel worm. High thrust and radial capacity is obtained through tapered bearings on the output shaft. Ball bearing construction is used throughout, and double-positive oil seals are used on both input and output shafts. Foot, shaft and ring-mounted (shown) units are offered. Made by **Sterling Electric Motors, Inc.**, Dept. NED, 5401 Telegraph Rd., Los Angeles 22, Calif.

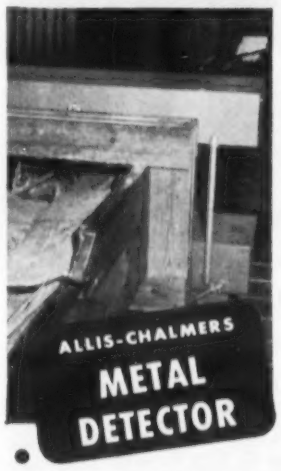
For more details circle NED-481 G7 on enclosed inquiry slip

DRILL MOTOR & STAND
for 1 to 3½ in. OD masonry drills

Efficient drilling of masonry with 1 to 3½ in. OD diamond bits is facilitated by this Truco hand swivel drill motor and portable drill stand, the latter consisting of base, column with screw extension, gear and rack feed. Heavy-duty, 1000-rpm motor with integral water swivel supplies flushing water to cutting face of drill. Compactness of motor permits its use alone in crawl spaces and duct areas. The stand facilitates drilling of vertical holes, with operator's weight serving to anchor the unit in position. It can also be anchored to floor, or braced to ceiling or walls. Supplied with 10-ft electric cable, motor plugs into any 110 v outlet. Made by **Wheel Trueing Tool Co.**, Water Swivel Div., 3200-220 W. Davison Ave., Detroit 38, Mich.

For more details circle NED-482 G7 on enclosed inquiry slip

Mr. Hi Frequency, the Electronic "Sleuth" Tracks Down Tramp Metal



Gives Positive Protection

THIS electronic Sherlock apprehends Mr. Tramp Metal before he can sabotage your quality product. Magnetic or non-magnetic particles, no matter how deeply embedded, cannot evade the piercing eye of the metal detector without triggering a warning or reject mechanism.

The Allis-Chalmers metal detector is economical to operate and is easily installed in any production set-up. For complete information, contact your nearby A-C office or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wis. Ask for Bulletin 15B7217B.

ALLIS-CHALMERS A-5285

For more details circle NED-483 G7 on enclosed inquiry slip

How Alcoa Aluminum Fasteners make good furniture even better

With your good name riding on every aluminum chair, chaise and settee, it pays to assemble with Alcoa® Aluminum Fasteners. You get perfect color match and lasting good looks with absolute protection against both galvanic and atmospheric corrosion. Your local Alcoa distributor has a complete stock of aluminum fasteners to meet your every need. He is listed in the Yellow Pages of your telephone directory.

ALCOA ALUMINUM FASTENERS

THE ALCOA HOUR TELEVISION'S FINEST LIVE DRAMA ALTERNATE SUNDAY EVENINGS

Your Guide to the Best in Aluminum Value

Fill out coupon for facts, samples

Aluminum Company of America
2245-G Alcoa Bldg., Pittsburgh 19, Pa.

Gentlemen: Please send complete specification data and samples of Alcoa Aluminum Fasteners.

Name _____
Title _____
Company _____
Address _____

For more details circle NED-484 G7 on enclosed inquiry slip

You save 5 ways with

SHENANGO CENTRIFUGAL CASTINGS

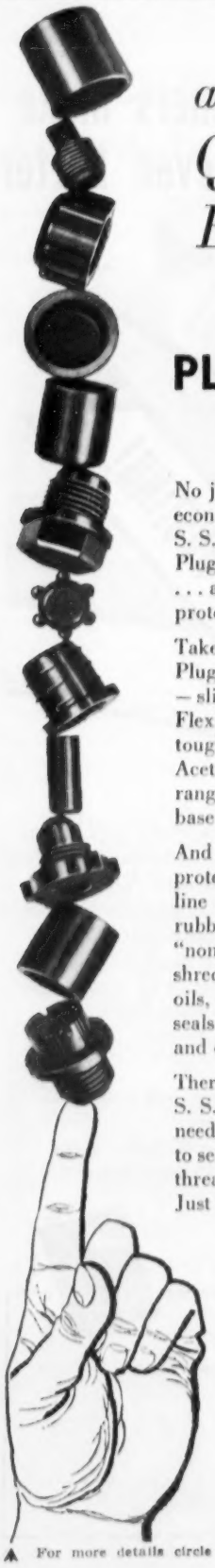
By using Shenango centrifugal castings for essentially symmetrical parts, you gain considerable savings because: ❶ The Shenango process automatically eliminates hidden defects in the metal . . . insures fewer rejects ❷ No patterns required; an important saving, particularly on special or small quantity runs ❸ Finer, more uniform grain structure means smoother, faster machining, better control, higher rate of completion ❹ With Shenango centrifugal method control, there's less excess metal to be machined away, less metal to buy and ship ❺ Because of their homogeneous, pressure-dense qualities, Shenango castings are stronger, have better wear-resistance, need less frequent replacement.

Check with Shenango on centrifugally cast parts for your needs—large or small . . . rough, semi-finished or precision-machined . . . ferrous or non-ferrous. For bulletins, write: *Centrifugally Cast Products Division*, The Shenango Furnace Company, Dover, Ohio.

SHENANGO CENTRIFUGAL CASTINGS

COPPER, TIN, LEAD, ZINC BRONZES • ALUMINUM AND MANGANESE BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL • ALLOY IRONS

For more details circle NED-485 G7 on enclosed inquiry slip



a balanced line
QUALITY...
ECONOMY

S.S.White

PLASTIC PLUGS AND CAPS

No juggling between quality and economy when you select from S. S. WHITE's balanced line of Plastic Plugs and Caps. They are *all* quality . . . and all designed to give maximum protection at the right price!

Take our line of *Rigid Acetate* Plugs and Caps. These are our finest — slightly higher in price than our Flexible Vinyl line — but strong, tough, not brittle, and will not shred. Acetate will stand a wide temperature range . . . is impervious to petroleum base oils and greases.

And to give you really low-cost protection, we make an economical line of *Flexible Vinyl*. Its non-waxy, rubber-like surface gives you a "non-slip grip" every time. It will not shred . . . is normally unaffected by oils, greases, gasoline . . . effectively seals in refrigerants, hydraulic fluids and other liquids.

There's a quality . . . *priced-right* S. S. WHITE plug or cap for every need and every budget. We'll be glad to send you samples — plain or threaded — in the sizes you need. Just write to:

S.S.White

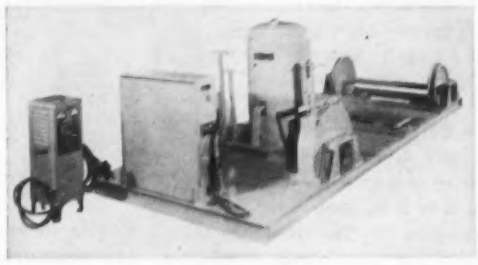
S. S. WHITE INDUSTRIAL DIVISION
Dept. 7P, 10 East 40th Street
New York 16, N. Y.

Western Office:
1839 West Pico Blvd.
Los Angeles 6, Calif.

For more details circle NED-486 G7 on enclosed inquiry slip

TRANSFER CARS
heavy duty battery powered units

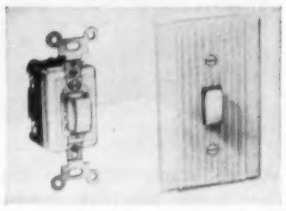
Controlled by pushbutton and traveling on rails, a series of battery powered transfer cars is available in models for transferring dryer and kiln cars, bulk steel



stock, dies and fixtures, castings, foundry flasks, baled or rolled materials and other heavy bulky items. They can be used indoors or outdoors and are built to withstand rough use, heat and dust. Cars have two forward speeds and reverse, foot and hand brakes, extra heavy electrical relays, high torque direct current motor and selenium rectifier for battery charging. Made by **Manufacturers Equipment Co.**, 208 Madeira Ave., Dayton 4, O.

For more details circle NED-487 G7 on enclosed inquiry slip

TAP ACTION SWITCH
button is touched to put light on

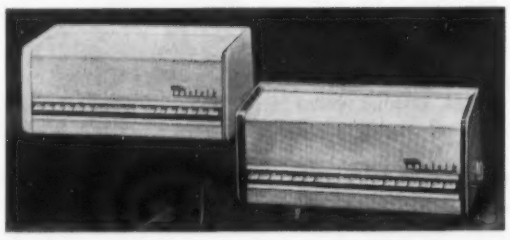


Instant light control at the gentlest pressure of finger tip, hand or elbow on any area of the button is afforded by this Quiette Tap Action switch. Unit assures safe, quiet mechanical operation of incandescent and fluorescent lights and appliances. It fits any standard toggle wall plate. Available with conventional binding screw or screwless terminals, switch has large silver alloy contacts and is rated 15 or 20 amp. Made by **Arrow-Hart & Hegeman Electric Co.**, 101 Hawthorn St., Hartford 6, Conn.

For more details circle NED-488 G7 on enclosed inquiry slip

INTERCOMMUNICATION SYSTEMS
units have from 6 to 24 stations

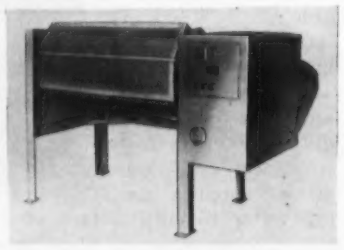
Printed circuits and transistors (optional) are incorporated in line of intercommunication systems. Capacities of single bank models in both custom and



executive series range from 6 to 24 stations without annunciators and from 6 to 12 stations with combination light and buzzer annunciators. Larger capacities can be specified. Features include a talk-listen control bar, separate speaker in executive models, priority override and optional telephone type handsets. Custom series can carry both secret and general or monitored conversations by use of the three-position control bar. Made by **Webster Electric Co.**, Teletalk Div., 1900 Clark St., Racine, Wis.

For more details circle NED-489 G7 on enclosed inquiry slip

MULTIBARREL FINISHER
adjustable speeds for range of uses



Variable speed direct gear drive on the model V-16 multibarrel tumbling, burnishing and deburring finisher permits speed adjustments from 8 to 25 rpm. Machine has a built-in magnetic brake, perforated metal safety guard, 16-cu ft capacity, choice of one to four-compartment barrels, seamless vinyl linings, 3-hp motor, forward and reverse jogging switch, and welded ¼-in. steel plate construction. Overall size is 82 x 42 x 64 in. Made by **Rampe Mfg. Co.**, 14901 Woodworth Ave., Cleveland 10, O.

For more details circle NED-490 G7 on enclosed inquiry slip

SAVE TIME, WEIGHT, HANDLING with TINNERMAN *Speed Clamps*®

HOSE CLAMP—One-piece, low-profile, spring steel. Ideal for low-pressure air, vent or drain lines. Easily applied to pre-latched position by hand, securely tightened with a pair of pliers. Ratchet-tooth locking mechanism is part of Clamp! Easily removed. For 15/32" O. D. hose, up.

ELECTRICAL HARNESS CLAMP Has a safe, interlocking tongue and slot that can't spring open accidentally, yet opens easily for servicing. No tools required. Can be pre-assembled to wire bundles before fastening to structure. For ⅛"-diameter bundle, up.

TUBE CLAMP—Simplifies attachment of tubing. With or without self-retaining SPEED NUTS that cut assembly time. With or without neoprene flame-resistant cushion. For 1/16" O.D. tubing, up.

Write for free descriptive literature!

TINNERMAN PRODUCTS, INC.
BOX 6688, DEPT. 12, CLEVELAND 1, OHIO

For more details circle NED-491 G7 on enclosed inquiry slip

This drive puts POWER into every hand pipe tool!

OSTER **No. 432 *Lightweight* CHAMP**

POWER DRIVE FOR HAND PIPE TOOLS

Send for complete information.

The Oster Manufacturing Company • 1311 East 289th Street, Wickliffe (Cleveland), Ohio

For more details circle NED-492 G7 on enclosed inquiry slip

SHEEHAN

METAL BELT PRESS CONVEYORS

fit most every stamping transfer operation

No slippage, due to oil and grease with SHEEHAN'S positive drive spike pulley. Where belt replacements are high with rubber and fabric belts due to sharp edges, grease and oils, SHEEHAN'S metal belts give as much as 10 times longer life. Many rubber belts cost more than SHEEHAN'S metal belts.

Hundreds in use showing great savings in large and small stamping plants.

Long life with trouble-free operation.

Write for literature and names of users.

R. T. SHEEHAN CO.
PLYMOUTH, MICHIGAN

For more details circle NED-493 G7 on enclosed inquiry slip

it's the EXTRA NEOPRENE puts the BRAWN in

BRONCO 66 Certified

electrical cords and cables

It's the bonus quantity of Neoprene—67.32%, certified by a registered professional engineer—in the outer protecting jacket that gives Bronco 66 Certified its extra toughness, greater resistance to oil, ozone, sunlight, makes it more flameproof, more resilient and flexible.

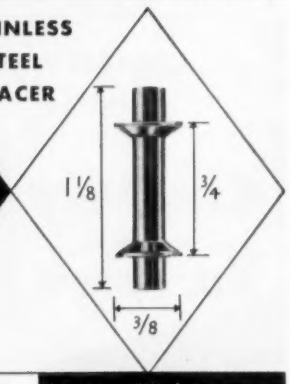
Sold nationally by electrical wholesale distributors

manufactured by WESTERN INSULATED WIRE CO. Los Angeles 58, California

▲ For more details circle NED-494 G7 on enclosed inquiry slip ▲

STAINLESS STEEL SPACER

SAVINGS $4.25 PER THOUSAND over machine method cost



SCREW MACHINING	$32.25 per thousand	COLD HEADED	$28.00 per thousand

Cold-Heading is the most versatile, most economical method for producing your fasteners and small parts. This case history is typical of thousands of money saving jobs we've done for our customers. May we quote on your requirements? Write today for the Hassall Catalog.

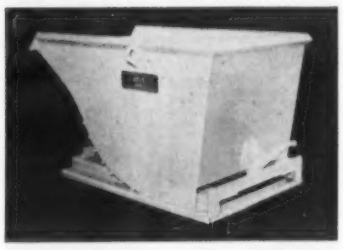
John Hassall, Inc., P.O. Box 2178 Westbury, Long Island, N.Y.

SINCE 1850 Hassall

NAILS, RIVETS, SCREWS AND OTHER COLD-HEADED FASTENERS AND SPECIALTIES

▲ For more details circle NED-495 G7 on enclosed inquiry slip ▲

SELF-DUMPING HOPPERS right themselves when emptied



Release of a gravity cam latch automatically dumps these hoppers, designed for handling of wet or dry, cold or hot bulk materials. After the load is dumped, the hoppers right themselves and lock in their normal position. Hoppers are electric welded of steel plate and structural steel. When not in use they are self-stacking and nesting. Capacities are ½, ¾, 1, 1½ and 2 cu yd. Lengths range from 49 to 74 in. and widths from 40 to 52 in. and heights from 35 to 46 in. Made by **Apex Welding & Fabricating Corp.**, Box 287-A, 30 Interstate St., Bedford, O.

▲ For more details circle NED-497 G7 on enclosed inquiry slip ▲

SMALL AIR COMPRESSOR supplies 4 to 5 cfm oil-free air

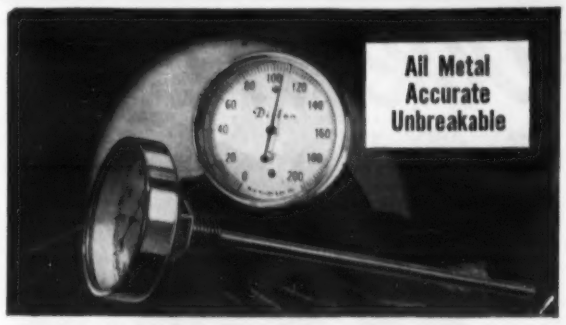
Oil-free air for operation of instrument controls, as well as for use in food processing, distilling and paint spraying, is supplied by the CACB air compressor. Carbon parts in the cylinder of this small, space - saving unit eliminate need for oil or water lubrication. Available with base or tank mounting, the single-stage, air-cooled compressor supplies 4 to 5 cfm of air and is suitable for discharge pressures of 40 to 100 psi. Automatic start and stop controls are supplied as needed. Made by **Gardner-Denver Co.**, 1350 Front St., Quincy, Ill.

▲ For more details circle NED-498 G7 on enclosed inquiry slip ▲

WELDING CABLE CONNECTORS one size fits all cable sizes

Watertight neoprene insulating sleeves, twist - lock connections and low resistance engagement are features of type M mating male and female plug connectors. They are supplied in one size for all welding cable lead and welding whip sizes from No. 4 through No. 4/0 awg. Maximum welding service rating is 550 amp. They are easily applied and sell for $4.90 per pair. Made by **Joy Mfg. Co.**, Electrical Products Div., Dept. W-1, 1201 Macklind Ave., St. Louis 10, Mo.

▲ For more details circle NED-499 G7 on enclosed inquiry slip ▲



DILLON stainless steel dial thermometers

Accurate temperature indication year after year is yours with *precision* Dillon thermometers. Direct-drive bi-metal coil eliminates gears and linkage. Big, clear dial markings assure correct readings. Moisture sealed. Overheat protected. Pressure proof. Corrosion resistant. *Individually calibrated.*

O. E. M. DISCOUNTS . . . your name on dial! Dillon is *the* O.E.M. thermometer. Simple design, volume production means lowest costs. High quality and accuracy assure user satisfaction. Your name on dial increases your prestige! Thousands in use!

Many Sizes, Ranges, Uses

- Stem Lengths: 2½" to 12"
- Dial Diameters: 1", 2⅜"; 3"; 5"
- Ranges: From 0 up to 1000° F From 0 up to 300° C
- For Gases or Liquids
- Screw-in or Surface Float
- Choice of mounting nut

Free! Complete engineering data. Write today!

W.C. DILLON & Co., Inc. 14578NE Keswick St., Van Nuys 1, Calif. "suburb of Los Angeles"

▲ For more details circle NED-500 G7 on enclosed inquiry slip ▲

ANOTHER *Safety-Tested* PENETONE PRODUCT

WON'T DAMAGE Any Surface

SENIOR Heavy Duty Liquid Cleaner & Degreaser

Completely safe for workers

Water soluble Senior works wonders on grease-clogged kitchen equipment, tools and machinery, floors and walls - endless other applications - on all metals, wood and painted surfaces, without damaging! Why? Because Senior contains the finest vegetable base oils, plus powerful wetting, emulsifying and dispersing agents. No acids, caustics or abrasives to stain and corrode.

And safety-tested Senior won't burn, explode or have toxic effect on workers because it contains no solvents. It's a must for your maintenance list.

FREE sample test Senior and see for yourself.

The PENETONE Company
74 Hudson Avenue, Tenafly, New Jersey

Liquid and Powdered Detergents and Degreasers • Industrial Strippers • Electrical Equipment Cleaners • Floor Finishes and Waxes • Corrosion Inhibitors • Automotive, Marine and Aircraft Chemicals

Mail Now! FOR FREE SAMPLE TEST

The Penetone Co., Dept. E37 74 Hudson Ave., Tenafly, N. J.

Without obligation, please rush me all details on Senior FREE sample test.

Name _____ Title _____
Company _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle NED-501 G7 on enclosed inquiry slip ▲

NEW "MICROFLO" PULSAFEEDER controlled-volume chemical pump for pumping precise volumes at micro-flow rates

from $295 with totally enclosed motor

Now you can pump problem liquids safely and precisely. "MICROFLO" has no *stuffing box*—hence *no leakage, no corrosion, no contamination!* Pumping rate is adjusted manually while pump is idle or operating. All liquid handling parts are of corrosion resistant materials. Other Pulsafeeder models for higher flow, higher pressures.

Model LS-10, capacity 2300 ML per hr. at 1000 psig.
Model LS-20, capacity 1040 ML per hr. at 2000 psig.

WRITE *for Bulletin 500 which gives complete specifications. Lapp Insulator Co., Inc., Process Equipment Division, 848 Wilson St., LeRoy, N. Y.*

Lapp PULSAFEEDER CONTROLLED-VOLUME CHEMICAL PUMP

▲ For more details circle NED-496 G7 on enclosed inquiry slip ▲

DOR-TITE

DA PRODUCTS SINCE 1918

for Sealing! Cushioning! Insulating! Silencing!

Air-tight plastic covering on the adhesive keeps DOR-TITE's adhesive extra tacky

Here's the soft, resilient sponge rubber stripping that solves countless problems . . . around windows, doors, etc. DOR-TITE installs fast thanks to factory-applied *extra tacky* adhesive. DOR-TITE stays put . . . never stretches . . . never creeps. Available in all popular sizes.

SPONGE RUBBER for • Pads • Gaskets • Cushions • Mountings

Available in all popular sizes

FREE SAMPLES

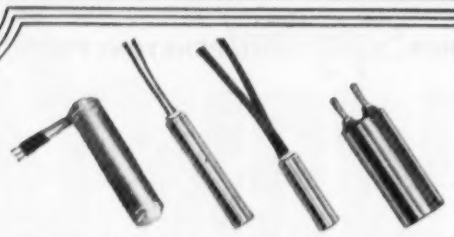
Write on your letterhead for samples of DOR-TITE and/or SPONGE RUBBER Dept NE-7

Installs in seconds!

DURKEE ATWOOD V-BELTS

DURKEE-ATWOOD CO. Minneapolis 13, Minn.

For more details circle NED-502 G7 on enclosed inquiry slip



When to specify Vulcan Electric

CARTRIDGE HEATERS

1. **When application is for:** Complete insertion into machine parts, dies, platens, molds, presses, die blocks of embossing machines, packaging machines, etc.
2. **When specifications call for:** Length — 1" to 25" (or longer); diameter — ¼" to 1-19/64" (or greater); wattage — 10 to 3200 (or higher); voltage — standard 115 or 230, special 6 to 440; sheath — brass, steel, nickel or high temperature alloys; standard or special lead wires or terminals.
3. **When you have "hot" problems:** Vulcan Engineers are ready to provide special heating units — engineered to your needs. Write for free catalog.

VULCAN

VULCAN ELECTRIC COMPANY
DANVERS 7, MASS.

Cartridge • Strip • Tubular • Immersion Electric Heaters
Soldering and Branding Irons • Solder and Glue Pots

For more details circle NED-503 G7 on enclosed inquiry slip

New, Lightweight, Powerful
FLEXIBLE TOOL SHAFT
Connects To Any Motor

Stow flexible tool shafts increase precision, eliminate operator fatigue on production grinding, polishing, sanding and other finishing operations in which the operator must hold the tool for long periods of time. Up to 3 HP can be transmitted through these new tool shafts, which consist of a core made of highest grade music wire rotating inside a rubber-covered casing. Each shaft furnished with ball bearing motor connection and high-speed ball bearing handpiece with removable wheel Arbor having ½-20" threads. An angle head can be used in place of the handpiece as shown in the photograph.

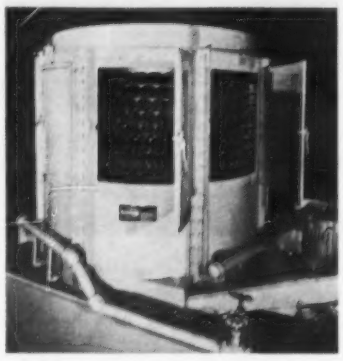
Four Sizes of these shafts are available . . . models 38, 40, 50 and 63, which come in 6-foot standard lengths. The largest shaft, model 63, will handle 3 HP at speeds up to 6900 RPM and has a maximum capacity for various accessories as follows: grinding wheel, 8" x 1"; buffing wheel, 8" x 1"; sanding disc, 9" diameter; sanding drum, 6" x 2½"; wire brush, 8" x 2"; steel drills, ½" diameter.

Write for Catalog 57

STOW MANUFACTURING CO.
26 Shear St. Binghamton, New York

For more details circle NED-504 G7 on enclosed inquiry slip

ROTARY STORAGE MACHINE
for circular blanks, finished gears



Circular blanks of varying thickness, as well as finished gears can be stored in this machine with no danger of nicking or marring of finished surfaces. Parts are carried in helical guides and make contact with rotating inner drum which raises them up to the outlet at top of machine. Drum has variable speed drive motor to accommodate fluctuations in production requirements. Machine can be combined with standard accessories in wash, rinse and dry operations. A low temperature draw furnace operating on the same principle is available. Made by **Leading Engineering & Mfg. Co.**, Dept. W, 350 S. Sanford St., Pontiac, Mich.

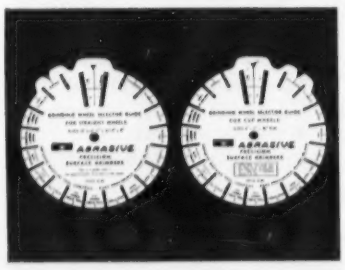
For more details circle NED-505 G7 on enclosed inquiry slip

MILLING MACHINE
has 6 x 20-in. table

Powered by a heavy duty ¾-hp ball bearing, totally enclosed motor, the model A-M milling machine accommodates No. 30MM standard adapters, most standard indexing heads, vises and special accessories. Offered with an optional cast metal base, it is 57 in. high and weighs about 650 lb. Head travel is 6 in., table travel is 10 in. and saddle travel is 4½ in. Micrometer feed screws can be installed on any travel. Table has a 6 x 20-in. work surface. Spindle is mounted on Timken bearings and a coolant system is optional. Made by **Barker Engineering Co.**, 501 Green Rd., Cleveland 21, O.

For more details circle NED-506 G7 on enclosed inquiry slip

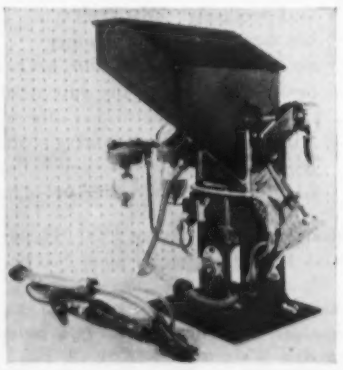
GRINDING WHEEL CALCULATOR
aids selection for 17 metals



Selection of the correct abrasive wheel for grinding 17 different, commonly used metals is facilitated with use of this pocket-size calculator. It indicates type of abrasive, grit size, grade and bond for both straight-type wheels in sizes 10 x ½, 12 x ½ and 1 x 3 in., and for cup wheel sizes 6 x 3 in. with ¾-in. rim. Calculator sells for $1 by **Abrasive Machine Tool Co.**, Dept. ND, Dexter Rd., East Providence, R. I.

For more details circle NED-507 G7 on enclosed inquiry slip

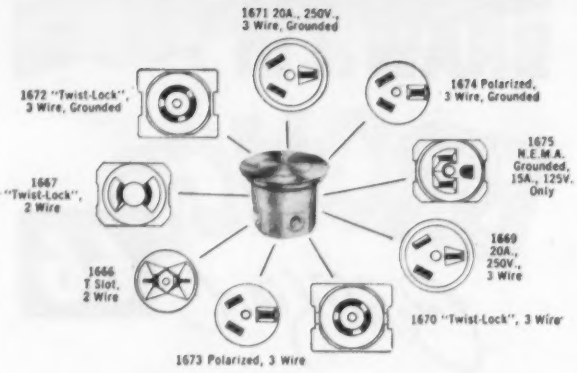
FASTENER FEEDER
for screws with washers



Improved model PS-5B Pneuma - Serve automatic fastener feeding equipment will accommodate screws with any type of preassembled washer, including internal or external tooth or spring type lock washers, and plain or spanner type washers. Oversize or misshapen screws are automatically trapped for ejection by a pneumatic blow-out. Screws with unusual balance points are fed constantly to any type of portable power driver. Made by **Geo. A. Tinnerman Corp.**, Dept. F, Box 2805, Cleveland 16, O.

For more details circle NED-508 G7 on enclosed inquiry slip

NEW! T&B floor box receptacle combination to fit all plugs and match all circuit wiring



Now you can save time, save installation money and increase safety — all these T&B receptacles fit all T&B floor boxes eliminating special boxes, special adapters and make-shift arrangements.

See your local T&B distributor for full information, or write:

THE THOMAS & BETTS CO.
Incorporated
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada

For more details circle NED-509 G7 on enclosed inquiry slip

save **money** on air cleaning with **Aluma-Aire** permanent, dry-type **FILTERS**

All standard sizes ½", 1" and 2" widths.

OUTLASTS ORDINARY FILTERS— CUTS MAINTENANCE EXPENSE, TOO!

Here's the filter you can depend on for efficient, economical service on any air cleaning task. ALL metal construction withstands years of use under normal conditions. Washes clean with water, yet it *won't* rust. Fireproof. Requires no oils or adhesives. Aluminum wool media does *ALL* the filtering. No more expensive solutions to buy; ends pyramiding replacement filter costs. Available with copper wool media for use in corrosive atmospheres.

Write for free folder and performance data.

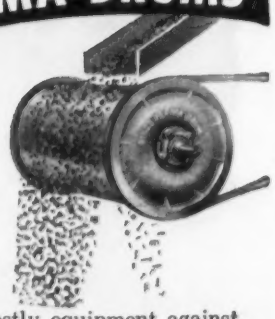
Carey Electronic Engineering Co.
METAL WOOL DIVISION
1893 Clifton Avenue Springfield, Ohio

For more details circle NED-510 G7 on enclosed inquiry slip

Where no other type of Magnetic Separator is practical . . .

use

DINGS PERMA-DRUMS



- in machines
- under chutes or spouts
- below apron conveyors
- in any confined space

Now you can protect costly equipment against tramp iron damage . . . prevent iron contamination of materials and products . . . in spots where no other type of magnetic separator can operate efficiently.

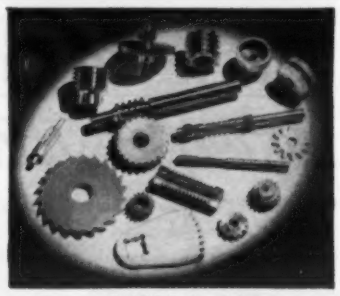
Why take a chance on tramp iron damage? Investigate the money-saving potential of Dings powerful, automatic, life-time guaranteed Perma-Drums.

Every feature is fully explained in Catalog C-1100-A. Write for your copy today.

Dings
DINGS MAGNETIC SEPARATOR COMPANY
4758 W. Electric Ave., Milwaukee 46, Wis.
FD-157 1/9

For more details circle NED-511 G7 on enclosed inquiry slip

when you want precision... get Abart CUSTOM-CUT Gears



Abart carries no stocks. Every gear is precision-cut to the customer's specifications. Spur, spiral, bevel, helical, internal, worm, rack and sprocket—in any quantity, from any material.

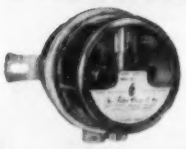
Send B/P and specs or sample for quotation. 96 pitch to 5/7 D. P.—¼" P. D. to 18" P. D.

Write for Abart Gear Bulletin

ABART GEAR and MACHINE CO.

4831 WEST 16th STREET • CHICAGO 50, ILLINOIS

For more details circle NED-512 G7 on enclosed inquiry slip



63300C

PHOTOELECTRIC CONTROLS for OUTDOOR LIGHTING

64401

Fisher-Pierce photoelectric controls provide dependable, automatic control of lights regardless of time of day, season or weather. Lights are switched on at the same daylight value each day, off when daylight returns. Non-mechanical, they never need setting or re-setting, even after power failures. The basic F-P circuit has proven dependable, rugged and trouble-free by more than nine years' use, in controlling lights on aircraft obstructions, signs and in store windows; in parking, loading and storage areas; in street lighting and other installations. Load capacities from 300 to 6000 watts; integral and auxiliary protective devices; wide variety of mounting arrangements; SPST, SPDT, DPST contacts; turn-on settings from 1 to 500 foot-candles.

Write for descriptive bulletins, outlining your requirements.

THE FISHER-PIERCE CO., INC.
86 PEARL STREET, BOSTON 85, MASS.

For more details circle NED-513 G7 on enclosed inquiry slip

WHEN YOUR VARIABLE SPEED DRIVE MUST MAINTAIN PRE-SET SPEED

DAY after DAY

Graham

most reliable variable speed drive made

- ULTIMATE in SIMPLICITY and COMPACTNESS — only the Graham is a straight line extension of a standard induction motor — or available without motor.
- UNLIMITED SPEED RANGE—from any desired maximum speed to zero, including reverse if wanted without stopping motor.
- UNMATCHED ACCURACY — of speed setting and resetting and speed holding.
- NO PERISHABLE PARTS — such as belts or tubes, requiring periodic replacement.
- PROVED PERFORMANCE — twenty years satisfactory use as standard equipment.
- LOW COST — a better job for less money.

GRAHAM TRANSMISSIONS, INC.
DEPT. NED • MENOMONEE FALLS, WISCONSIN

For more details circle NED-514 G7 on enclosed inquiry slip

HYDRAULIC CUTTER
is tension-balanced portable tool

Dolly mounting makes this Guillotine hydraulic cutter a portable unit. It includes motor, pump, oil reservoir and cutting head suspended on a spring tension balancer. Cutter has clearance for 42-in. diameter coils when used to service cold heading machines. Operation is by fingertip control to any position down to floor level. Illustrated unit can cut 1 in. of carbon steel in 1¼ seconds. Other heads with ½ and 1¼-in. capacities are available, as are variations in dolly mounting. Made by **Manco Mfg. Co.**, Washington St., Bradley, Ill.

For more details circle NED-515 G7 on enclosed inquiry slip

PLASTIC BALL VALVES
corrosion resistant sizes to 3 in.

Compatible with standard fittings and piping methods, series of corrosion resistant plastic ball valves feature full flow and positive shut-off in both directions. They have female threaded ends in ½, ¾, 1, 1½, 2 and 3 in. nominal pipe sizes, all rated 150 psi. Depending upon material, allowable temperature is over 200° F in continuous duty. Quick opening and self-lubricating units are available in polyvinyl chloride, Penton, polyethylene and co-polymer materials. Teflon seals resist abrasion and are quickly replaceable. Made by **Chemtrol Corp.**, Dept. NED, 1417 W. El Segundo Blvd., Compton, Calif.

For more details circle NED-516 G7 on enclosed inquiry slip

LIGHTWEIGHT TROLLEY HOISTS
capacities range from ¼ to 10 tons

Two lines of lightweight Budgit aluminum army type trolley hoists are adaptable to a wide range of I-beam sizes by rearranging spacer washers on the cross shafts. Low headroom Budgit aluminum chain blocks have antifriction bearings, load distributed on two sides of each gear, "full jeweled" load brake, alloy steel load chain and safety load hooks. Trolleys have sealed ball bearing wheels, hardened wheel treads and end bumpers which act as safety lugs. One line is hand geared and has 1 to 10-ton capacity units. Other has push type trolley hoists with capacities from ¼ to 10 tons. Made by **Manning, Maxwell & Moore, Inc.**, Shaw-Box Crane & Hoist Div., Park St. & Broadway, Muskegon, Mich.

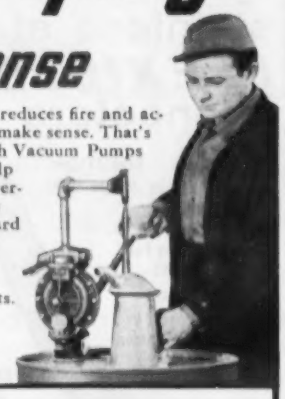
For more details circle NED-517 G7 on enclosed inquiry slip

VARIABLE TRANSFORMER
has an isolated secondary winding

Double wound LW136 Powerstat variable transformer features an isolated secondary winding on a single core. Absence of electrical linkage between windings allows connections for unit's use as a source of adjustable low voltage output, a limited range line corrector, or a limited range "buck-boost" variable transformer. Primary consists of two windings arranged for either parallel or series connection. Any single phase unit can be connected for either 120 or 240 v, 50/60 cycle input and can be used as source of 0-30 v isolated output. Any three-phase, three-gang unit can be connected for either 240 or 480-v, 60-cycle input and can be used as a source of 0-60 v isolated output. Models for manual or motor-driven service are offered by **Superior Electric Co.**, Dept. NED, 83 Laurel St., Bristol, Conn.

For more details circle NED-518 G7 on enclosed inquiry slip

Pumping makes sense



Any plant improvement that reduces fire and accident hazards certainly does make sense. That's the case when Tokheim High Vacuum Pumps are put into service. They help prevent spilling, slopping, overfilling and dripping. Operate on both forward and backward strokes—deliver 20 gallons per 100 strokes. Available with hose or spout outlets and other optional attachments.

Call your dealer or Tokheim representative; write for literature and approved list of liquids.

QUALITY TOKHEIM HIGH VACUUM HAND PUMPS

pump many liquids

Acetates • Alcohols • Aromatic Solvents Chlorinated Solvents • Glycols • Ketones and Ethers • Petroleum Products & Solvents • Plasticizers • Water and Others.

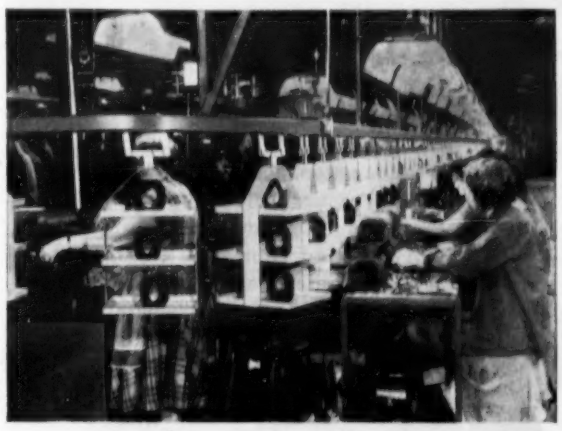
Alternate parts for special liquids

UL FM

General Products Division
TOKHEIM CORPORATION
DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT SINCE 1901
1656 Wabash Avenue Fort Wayne 1, Indiana

Subsidiaries: Tokheim N.V., Leiden, Holland—GenPro, Inc., Shelbyville, Ind.
Factory Branch: 475 Ninth Street, San Francisco 3, California
In Canada: Tokheim-Reeder of Canada, Ltd., 205 Yonge St., Toronto, Ont.

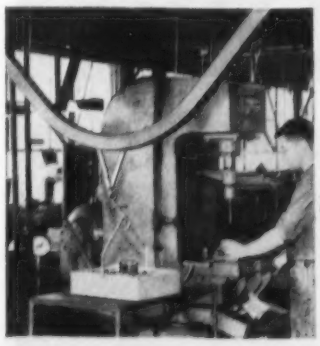
For more details circle NED-519 G7 on enclosed inquiry slip



R-W "Zig-Zag" CONTINUOUS POWER CONVEYORS

provide real automation for COST-SAVING OPERATION!

The above photo illustrates how various materials handling problems on the machining and assembly lines were effectively solved, for an electric motor manufacturer, with R-W "Zig-Zag" Conveyors. "Stuffing-Trays" carry a continuous supply of work to assemblers seated on both sides of a huge bench and just as easily carry the finished assemblies on to other operations in the plant. This "Zig-Zag" system utilized available overhead space to increase production efficiency and provides for a saving of valuable floor space. R-W "Zig-Zag" Conveyors are flexible, easy to install, easy to alter or expand, economical to operate and offer longer, safer, more efficient materials handling service on any production line.



The photo (left) and line drawing demonstrate how the R-W "Zig-Zag" Conveyor automatically picks-up full trays and automatically deposits them at the unloading station. Machine operator starts cycle by merely sliding full trays into the conveyor path.

WRITE TODAY—for complete information request Catalog No. A-93R.

Richards-Wilcox
MANUFACTURING COMPANY
MATERIAL HANDLING DIVISION

435 W. THIRD STREET • AURORA, ILLINOIS

For more details circle NED-520 G7 on enclosed inquiry slip

ALLFLEX
stainless steel
FLEXIBLE
connectors

NEW STOCK SOLUTION TO ALL PIPELINE PROBLEMS.

- Dampens Vibration
- Compensates For Misalignment
- Permits Offset Movement
- Absorbs Expansion

Now available in these standard stock sizes & lengths:

Stock Sizes	Stock Lengths
¼"	12"
⅜"	18"
½"	24"
¾"	30"
1"	36"
1¼"	48"
1½"	
2"	

The corrosion, heat and pressure resistance of Stainless Steel *ALLFLEX* Connectors will solve all pipeline problems caused by too rigid connections. One piece construction with standard pipe threaded fittings gives *FLEXIBILITY plus* — in installing and in longer service life. SAME DAY SHIPMENTS!

Write for full information.

ALLIED METAL HOSE COMPANY

3788 NINTH STREET
LONG ISLAND CITY 1, NEW YORK

For more details circle NED-521 G7 on enclosed inquiry slip

RUEMELIN BLAST GENERATORS

A practical low-cost sand blast used by plant engineers for maintenance work. Cleans rust, paint, scale from piping, valves, fittings, renovating buildings, stripping paint from trucks, busses, trailers, railroad cars, structural steel, storage tanks, ship hulls, etc. Can be fitted with Wet Adapting Nozzle for eliminating dust.

Write for Bulletin 36-C

•

RUEMELIN MFG. CO.
3883 N. Palmer St.
Milwaukee 12, Wis.

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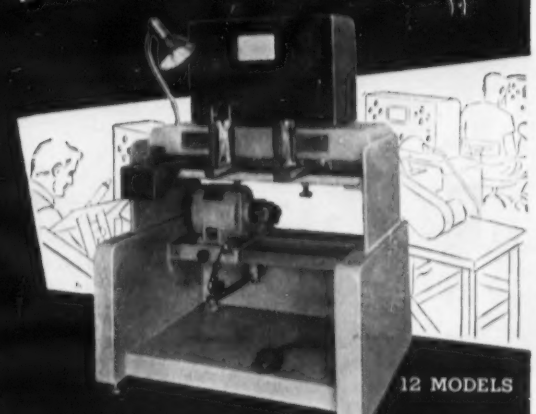
Manufacturers and Engineers
SAND BLAST AND DUST COLLECTING EQUIPMENT, WELDING FUME COLLECTORS.

For more details circle NED-522 G7 on enclosed inquiry slip

Best PRODUCTION STANDARDS with Better BALANCERS BY BEKO



12 MODELS

BEKO dynamic and static balancers are proving their superiority in use every day and you can better your existing production standards at a surprisingly low initial cost. These BEKO balancers are geared for high production on close tolerance work. Their simplicity of operation with optimum worker convenience allows thoroughly efficient operation by unskilled workers. Accurate calibration directly in terms of unbalanced correction either to remove or add weight.

Write for FREE catalog

BALANCE ENGINEERING CO. • CHICAGO | Sales Division: MACDELL CORP. 842 W. LAKE ST. • DEPT. NED. CHICAGO 7, ILL.

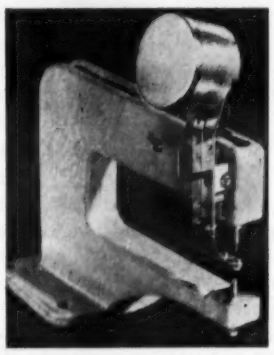
For more details circle NED-523 G7 on enclosed inquiry slip

DUMPING REFUSE CONTAINER
truck-mounted unit is cab-operated

Dempster-Dumpster type GRD model 304-F-2 dumping refuse containers are available in sizes up to 21 cu yd for payloads to 36,000 lb. They are mounted on trucks and feature automatic pickup of the detachable containers in a continuous operation with the driver never leaving the truck cab. Illustrated unit has extended height of 23 ft. Clearance under forks ranges up to about 11 ft. Dumping can be into railroad gondola cars and bins. Various types of containers are available. Hydraulic controls are conveniently located in the cab. Made by **Dempster Brothers, Inc.**, 34 Springdale Ave., Knoxville 17, Tenn.

For more details circle NED-524 G7 on enclosed inquiry slip

EYELETTING MACHINE
handles all standard size eyelets



Automatic feed mechanism of this eyeletting machine feeds a constant flow of eyelets to the feed track faster than operator requirements. Jam-free machine is suited for eyelet application in production of electronic printed circuits, novelty goods, electrical products, leather goods, and cloth and paper products. It is available as foot pedal-operated model AE-1 or air cylinder-actuated model AE-2. Throat accommodates workpieces up to 11 in. wide. Stroke length is adjustable to prevent damage to fragile materials. Maximum jaw clearance is 1¼ in. Track and hopper assemblies for any eyelet size from 1/16 to ¼-in. barrel diameter can be specified. Larger or smaller eyelets can be ordered. All assemblies can be interchanged. Made by **Eyelet Tool Co.**, 236A Broadway, Cambridge, Mass.

For more details circle NED-525 G7 on enclosed inquiry slip

SPEED REDUCER
shaft mounted unit for ¼ to 40 hp

Ratio changes are made in a few minutes on this shaft-mounted speed reducer by changing pulleys. Output speeds from 10 to 420 rpm are available on units offered in most ratings from ¼ to 40 hp. Reducer is easily mounted on the driven machine, with a standard drive motor located on ceiling, floor or wall. Mounting range is 360 degrees around the driven shaft. Single and double reduction models are available in 5:1 and 15:1 ratios. Made by **General Electric Co.**, Gear Motor & Transmission Components Dept., 1 River Rd., Schenectady 5, N. Y.

For more details circle NED-526 G7 on enclosed inquiry slip

DRAFTSMEN'S PENCIL POINTER
makes 4, 7 and 10-degree points

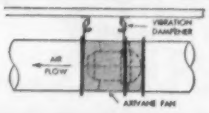
Clutch-type draftsmen's pencils can be sharpened to 4, 7 and 10-degree points with the Tri-Pointer, a three-nozzle sharpening instrument. Simple rotation of nozzle in either direction points the lead. Pencil is then dipped into center metallic-hay cleaning pot to remove loose graphite. Hands and work thus stay clean. Made by **Apsco Products, Inc.**, Box 840, Beverly Hills, Calif.

For more details circle NED-527 G7 on enclosed inquiry slip

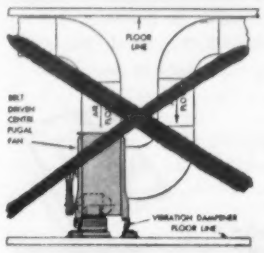
NEW INDUSTRIAL FANS
INSTALL FASTER...IN DUCT

COMPARE INSTALLATION The Joy fan needs no foundation, or special ductwork . . . its straight-thru design makes it a part of the duct—and adjustable blades allow for unpredictable pressures . . . installs 3 times faster with far less material and labor costs.

JOY AXIVANE FAN



OLD STYLE FANS



SPACE REQUIREMENTS —the Joy fan is up off the floor . . . requires up to ⅔ less space . . . can be used where other types will not fit. *Joy Manufacturing Company, Oliver Building, Pittsburgh 22, Pa.* In Canada: *Joy Manufacturing Company (Canada) Limited, Galt, Ontario.*

Write for BULLETIN 177-54

WSW I 6655-177

JOY...EQUIPMENT FOR ALL INDUSTRY

For more details circle NED-528 G7 on enclosed inquiry slip

10 power FLAW FINDER

Quick-focusing illuminated magnifier—removable handle is a pocket flashlight. $8.95—with leather case, $12.45

40-50-60 power "PEN" MICROSCOPE

Pen size precision instrument with magnification equal to large lab models. With leather case, $17.50

Orders shipped immediately

WRITE TODAY for illustrated literature.

Since 1927 — manufactured in the U.S.A. by —

E. W. PIKE & CO., INC.
492 North Ave., Elizabeth, N. J. • ELizabeth 2-0630

For more details circle NED-529 G7 on enclosed inquiry slip

ELECTRAN

Multi-Purpose Step-Down TRANSFORMERS

. . . one transformer or a HUNDRED

Same day delivery from our stock. From 0.1 to 5.0 K.V.A. Ten standard types plus special variations to meet your specific conditions. A transformer you can depend on from a maker you can depend on!

(We have never yet been notified of a field failure of any of these units unless overloaded or otherwise incorrectly used.)

Write for bulletin 47D

ELECTRAN MFG. CO.
1901 CLYBOURN AVENUE • CHICAGO 14, ILLINOIS

For more details circle NED-530 G7 on enclosed inquiry slip

THE NEW REZNOR

is the only GAS UNIT HEATER with ALL these advantages

- Clean, modern design, back as well as front . . . all controls and connections inside the cabinet.
- FlexiTemp control system with automatic two-speed fan control to provide nearly continuous air circulation and minimize temperature fluctuation (optional).
- No costly frills and gadgets . . . features which are needed only to meet special situations always separately listed and priced.
- Winter/summer switch with convenient pull cord for operation of fan alone during hot weather.
- Fan or blower models in ten sizes from 25 to 300 thousand BTU.

Write today for free catalog GN-57.

REZNOR WORLD'S LARGEST-SELLING DIRECT-FIRED UNIT HEATERS

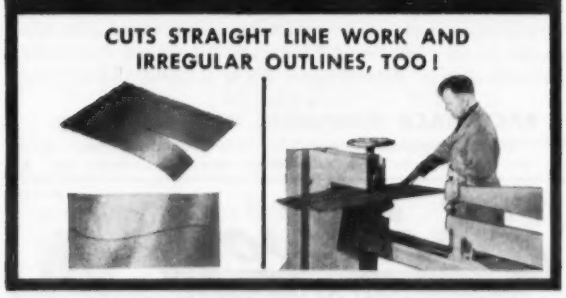
Reznor Manufacturing Company, 41 Union Street, Mercer Pennsylvania

For more details circle NED-531 G7 on enclosed inquiry slip

NEW! NIAGARA RING & CIRCLE SHEAR

makes quick, easy work of cutting true circles

CUTS STRAIGHT LINE WORK AND IRREGULAR OUTLINES, TOO!



Here's a fast, versatile and profitable performer! Designed to provide the utmost in operating ease and cutting accuracy, this all-new Niagara Ring and Circle Shear No. 31-RC features a self-compensating circle arm which floats on guided ways to maintain true center automatically. Time-consuming adjustment for variations in thickness of material, overlap of cutters and diameter of circle is thereby eliminated.

Set-up is simple: An adjusting crank and convenient scale enable quick positioning of the circle arm for cutting to various diameters. A quick-acting cam lever actuates the center clamp of the circle arm to hold varying thicknesses of material securely at all times.

Of sturdy, all-steel construction, this compact, modern machine is equipped with swing and slitting gages; high carbon, high chrome cutters; quiet operating, hobbed steel gears plus anti-friction thrust and bronze bushed bearings. With a capacity of 10-gage mild steel, it cuts both straight line work and irregular outlines as well as circles, circular holes and rings.

GET THE FULL STORY by writing for new, illustrated Bulletin 70 Supplement today, as well as literature on other Niagara Circle Shears, Ring and Circle Shears, Slitting Shears, Combination Shears and Flangers.

NIAGARA

America's Most Complete Line of Presses, Shears, Press Brakes, Other Machines and Tools for Plate and Sheet Metal Work

NIAGARA MACHINE & TOOL WORKS, BUFFALO 11, N. Y.

DISTRICT OFFICES: Buffalo • Cleveland • Detroit • New York • Philadelphia

Dealers in principal U. S. cities and major foreign countries

For more details circle NED-532 G7 on enclosed inquiry slip

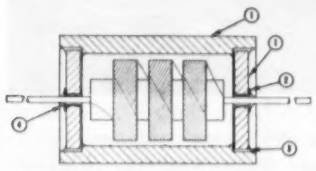
PLATFORM TRUCK
transports loads up to 4000 lb

Loads up to 4000 lb are transported through confined aisles and crowded areas, as well as up 10 per cent ramp inclines, by the Freighter platform truck. Powered by a Wisconsin model AEN industrial engine with automatic drive, it can operate at speeds up to 10 mph. Throttle ring is mounted within steering wheel and hand operated brake control bar is forward of operator and below the steering wheel. Steering ratios of either 1:1 or 3:1 are offered. The 360-degree steering facilitates operation in a 71-in. 90-degree intersecting aisle. Bed measures 60 x 42 in. and has 5/8-in. slope to center to stabilize loads. Electric starting and an engine hour meter are standard. Made by **Hyster Co.**, 2906 N.E. Clackamas St., Portland 8, Oreg.

For more details circle NED-533 G7 on enclosed inquiry slip

INDUCTANCE COILS
nonflammable, hermetically sealed

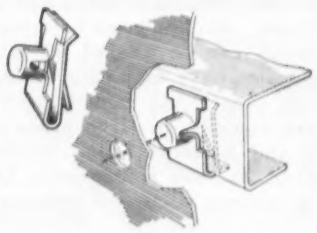
Hermetically sealed ceramic cases render series of inductance coils nonflammable, nonhygroscopic and virtually unaffected by atmospheric conditions. Steatite casing (1) and end plates are sealed with an epoxy filler combination (3). End plate perforations for lead wires are silvered (2), and lead wires are soldered to the silvered area for a complete seal (4). Housing is vacuum filled with a microcrystalline wax before sealing. Tests show an insulation resistance of 500,000 megohms. Seals withstand rapid cycling from −55 to 105° C. Coils range up to 20 microhenries inductance and windings range from a single solenoid to a multiple pi design. Various coil materials are wound on phenolic, powdered iron or ferrite forms. Made by **Speer Carbon Co.**, Dept. ED, St. Marys, Pa.



For more details circle NED-534 G7 on enclosed inquiry slip

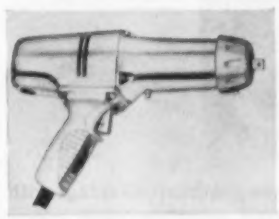
SHELF-FASTENING CLIP
one-piece unit has reverse use

One-piece Speed Clip features reverse application for fastening shelving on both sides and the back of a cabinet. When fastening the back of the shelf, clip is snapped up through slotted hole in bottom flange of shelf. Leg on back of clip springs over slot to lock the clip in position. Projection on the clip is then pushed into a hole on the back wall of the cabinet. For side fastening, clip is snapped down through slit in cabinet side. Shelf, with slotted hole, then slips down over projection on the clip. With four clips in place, shelf is first engaged at rear, then lowered down in front, completing entire operation in less than 1 minute. Made by **Tinnerman Products, Inc.**, Dept. 14, Box 6688, Cleveland 1, O.



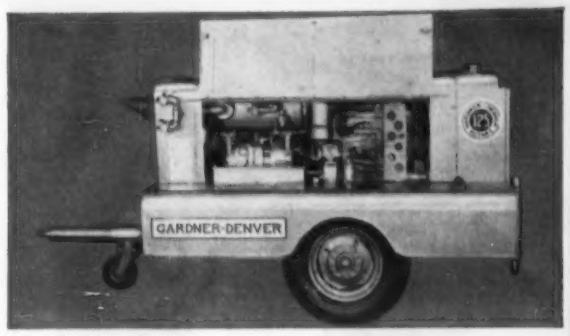
For more details circle NED-535 G7 on enclosed inquiry slip

IMPACT WRENCH
has built-in adjustable torque



Neoprene-steel energy accumulator comprises the Power Core of the PET impact wrench. A twist of the calibrated nose cap adjusts the torque to the job requirements. Power Core absorbs shocks of impact, preventing their transmission to the operator. Tool has a 3/8 to 1/2-in. bolt capacity and a torque range of 105 to 275 lb-ft. Maximum torque is reached in 6 seconds. Wrench delivers 1600 to 1800 impacts per minute and cannot overload or stall. Made by **Portable Electric Tools, Inc.**, 323 W. 83rd St., Chicago 20, Ill.

For more details circle NED-536 G7 on enclosed inquiry slip



New Gardner-Denver Rotary Portable Speeds Maintenance

The Gardner-Denver 125 rotary portable features: Clutch for cold-weather starting • Circulating water system controls compressor oil temperature • Water cooling for steady running in all weather • Delivers low-cost air, requires little maintenance.

Team-up the 125 with rugged Gardner-Denver maintenance tools—paving breakers, utility drills, tampers, sheeting drivers, trench diggers, grinders, sump pumps and air hoists. Write for descriptive literature today.

ENGINEERING FORESIGHT—PROVED ON THE JOB IN GENERAL INDUSTRY, CONSTRUCTION, PETROLEUM AND MINING

GARDNER-DENVER

Gardner-Denver Company, Quincy, Ill.

For more details circle NED-537 G7 on enclosed inquiry slip

"FOOLPROOF" TANK WEIGHING WITH EMERY LOAD CELLS

'rolling ball' head

COUNTERACTS OFF-CENTER LOADING

The tank shown above is one of the simplest arrangements of an Emery Weighing System utilizing the new "Rolling Ball" Load Cell. It consists of one Emery Cell to support the front end of the tank and two Emery Ball Pivot Assemblies or some other support such as an "I" beam for the back of the tank.

The hydraulic pressure in the cell actuates an indicator, recorder or controller which is so calibrated that it reads directly the weight of the tank contents.

Note: This arrangement is only one of fifteen discussed in our new Bulletin 561. If you have a tank weighing problem, send for Bulletin 561 today.

THE A. H. EMERY COMPANY

Pine Street • New Canaan, Connecticut

For more details circle NED-538 G7 on enclosed inquiry slip

Prompt Service on RAYMOND Chrome Vanadium

DIE SPRINGS

STOCK OR SPECIAL SIZES

MEDIUM, MEDIUM-HEAVY, HEAVY DUTY

Distributed by leading die set manufacturers

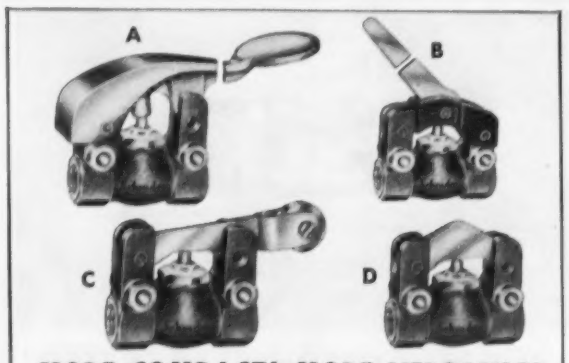
Wide variety of hole and rod sizes, lengths and deflections. Increased fatigue life. Reduced down time. *Write for specifications and price list, and name of nearest distributor.*

RAYMOND Manufacturing Co.

DIVISION OF ASSOCIATED SPRING CORPORATION

DEPT. NED-1 CORRY, PENNA.

For more details circle NED-539 G7 on enclosed inquiry slip



MORE COMPACT! MORE VERSATILE!

NEW Schrader® 2-and 3-way air control poppet valves

Interchangeable actuating levers bring new flexibility to these sturdy, space-saving air control valves. A single unit can now be quickly adapted to cam, roller tripper, or manual actuation. The compact body provides easy application of these valves to all types of air controls.

This new series features a specially designed brass body with ¼" ports and convenient "in-line" mounting holes. Air flow capacity is 70 cubic feet per minute, at 100 psi inlet pressure. Shown above: A) hand lever, B) hand lockdown lever, C) roller lever, D) solid angle lever types. Write for free Schrader catalog.

A. SCHRADER'S SON
Division of SCOVILL
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

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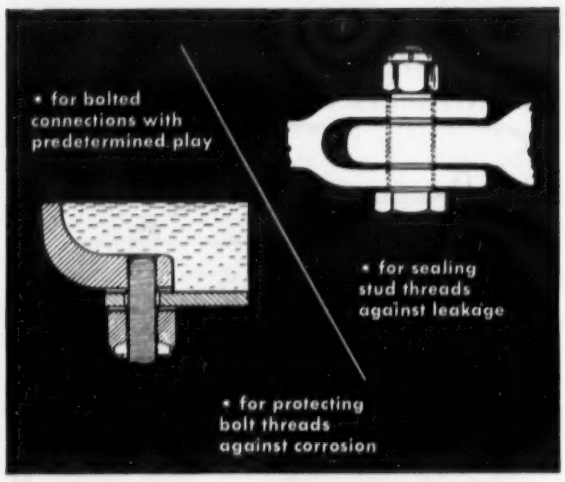
ELASTIC STOP® nuts:



. . . and wherever a nut must stay tight or maintain its setting under all conditions of vibration and impact. Available in the size and type for your particular fastening problem. Complete information on request—address Dept. N80-753.

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, N. J.

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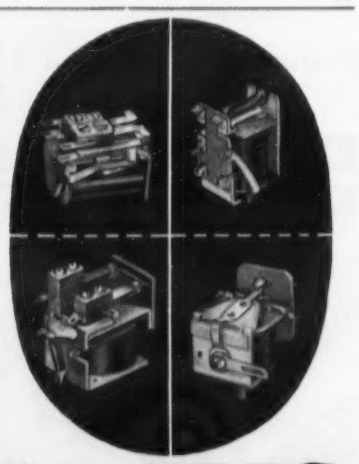
COMAR RELAYS



QUALITY ENGINEERED FOR DEPENDABLE OPERATION

Comar relays are preferred by leading manufacturers everywhere. Highest quality, precision engineered, they help improve the performance of your product. Inquiries invited.

Comar ELECTRIC COMPANY
3349 ADDISON ST., CHICAGO 18, ILLINOIS

RELAYS • SOLENOIDS • COILS • SWITCHES • HERMETIC SEALING

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ULTRASONIC CLEANING UNITS
output ranges from 50 to 250 w

Ultrasonic cleaning units are furnished with electronic generator, barium titanate transducer and tank assembly, and connecting cables. Power output ranges from 50 to 250 w. Single knob to vary the frequency and simple on-off switch are the only controls. Meter measures output. Generators allow use of two cleaning transducers alternately. Applications include cleaning of meters and movements, printed circuits, precision parts, bearings, synchros, and for radioactive decontamination. Units operate on 110-v input at 40 kc. Models 1105, 1135 and 1145 have 2-qt, 1-gallon and 2-gallon tank capacities, respectively. Made by **Alcar Instruments, Inc.**, Dept. NED, 17 Industrial Ave., Little Ferry, N. J.

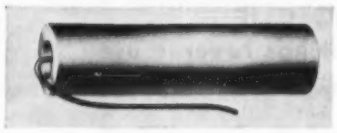
▲ For more details circle NED-543 G7 on enclosed inquiry slip ▲

SMALL INSULATED TERMINALS
0.093 in. diameter, 0.250 in. high

Sealectro subminiature terminals run as small as 0.093-in. in diameter and from 0.250 to 0.5-in. high, depending on whether they are stand-off or feed - through types. Terminals press-fit into chassis holes with simple insertion tool and drill-press equipment, without need for nuts, washers or lockwashers. With the Teflon body, terminals are nonbreakable and shockproof. They also resist humidity, corrosion, fungus and high temperatures. Despite their small size, terminals withstand severe service in guided missiles, radar, communications and electronic computers. Made by **Sealectro Corp.**, 606 Fayette Ave., Mamaroneck, N. Y.

▲ For more details circle NED-544 G7 on enclosed inquiry slip ▲

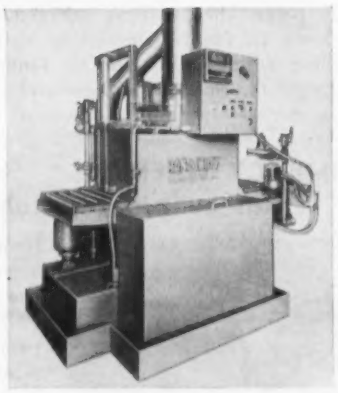
SMOKE CANDLES
aid air circulation studies



Finding leaks, tracing air duct circulation and observing ventilation patterns are typical applications of these smoke candles, offered in white and yellow smoke-producing types. Smoke leaves harmless stain around the leak which can be washed off later after leak location. Candles have safe long fuses, can be dropped without danger and cannot ignite spontaneously. They are nontoxic in large areas and are available in 1, 2 and 3-minute sizes. Made by **Schiller Mfg. Co.**, Dept. SC, 409 E. Jefferson, Detroit 26, Mich.

▲ For more details circle NED-545 G7 on enclosed inquiry slip ▲

INTER-PROCESS WASHER
for cleaning between operations



Spot cleaning to remove chips and cutting oils from machined parts in transit between machining operations is function of this cabinet type interprocess washer. Parts on the roller conveyor, on fixtures or in baskets are loaded into the cabinet prior to closing air - operated sliding doors at both ends. Thorough spray action cleaning with a heated recirculated washing solution takes place, after which the part or parts are removed and the cycle repeated. Parts with a maximum size of 30 x 15 x 12 in. can be cleaned. Production rate is variable according to length of time required for the part. Gas, steam or electric solution tank heaters are available. Made by **Ransohoff, Inc.**, N. Fifth & Ford Blvd., Hamilton 27, O.

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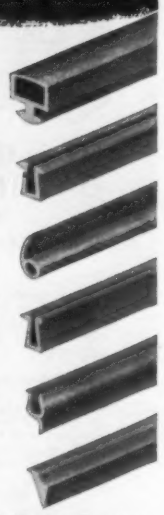
EXTRUSIONS

TO YOUR
SPECIFICATIONS
By CONNEAUT



If you need production of extruded plastic shapes, or special plastic compounding to meet unusual product specifications, write, wire or phone Conneaut. We have the experience and facilities to meet your requirements for either or both efficiently, rapidly and economically. At no obligation we'll quote from your prints and specifications, or analyze your problem and make recommendations.

Write for FREE Illustrated Brochure
giving complete details on Conneaut's custom service in plastic compounding and extruding. 440-D

CONNEAUT
RUBBER & PLASTIC COMPANY
CONNEAUT, OHIO

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For Accurate TEMPERATURE RECORDS at MODERATE COST

Use TEMPSCRIBE Recorders

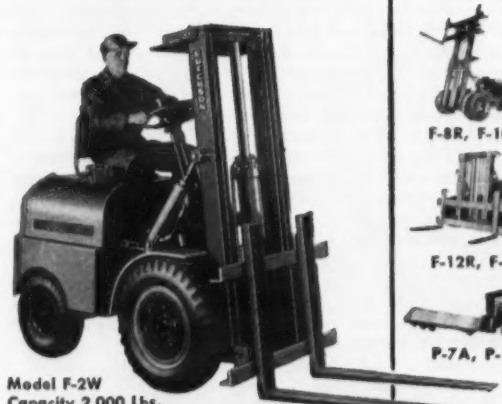
The TEMPSCRIBE self-registering Recording Thermometer meets a long-felt need for a moderately priced recorder for general purpose applications where a graphic record of temperature in surrounding air is required. The record—written on an easy-to-read chart, 4" in diameter, with graduations spaced uniformly over full range—is indispensable wherever knowledge is desired if temperature goes above or below any given point. TEMPSCRIBE is the only recorder made with pen and actuating element in door, which, when opened, permits a clear view of the complete chart, and easy chart replacement without danger of damaging pen arm or accidentally marking chart.

Write for Bulletin 704

BACHARACH INDUSTRIAL INSTRUMENT CO.
200 N. Braddock Ave. • Pittsburgh 8, Pa. T-13r

▲ For more details circle NED-548 G7 on enclosed inquiry slip ▲

Erickson
THE WORKHORSE OF LIFT TRUCKS



F-3W, F-4W
F-8R, F-10R
F-12R, F-16R
P-7A, P-10A

Model F-2W
Capacity 2,000 Lbs.

Every Erickson is tailor-made for your job—any lift desired, any size or style of fork, any attachment. A perfectly balanced truck with best traction outdoors and maneuverability indoors. Proven by 30 years' performance in the rugged concrete block industry.

12 Fork Models
2,000 to 20,000 lbs.

5 Platform Models
5,000 to 15,000 lbs.

WRITE FOR CATALOG AND PRICES

ERICKSON POWER LIFT TRUCKS, INC.
247 St. Anthony Blvd. N.E., Minneapolis 18, Minn.

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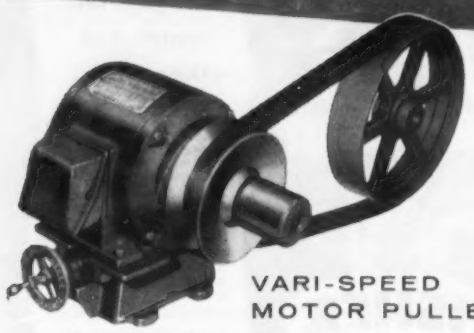
ADD FLEXIBILITY to your machines with the REEVES MOTOR PULLEY



VARI-SPEED MOTOR PULLEY

provides an instantly variable speed drive within 4:1 ratio for any constant speed motor. Sizes to 15 hp.

Write ND-30c-V545 for bulletin

REEVES PULLEY COMPANY
Division of RELIANCE Electric & Engineering Co.
COLUMBUS, INDIANA

For more details circle NED-550 G7 on enclosed inquiry slip

START HERE TO GET RID OF THE IRON IN DRY MATERIAL

FRANTZ FERRO FILTER® MAGNETIC SEPARATOR

An extremely simple but highly effective method of extracting iron particles from powdered and granular materials that you manufacture, buy, sell or use in processing. Made in two sizes with capacities from 1 to 25 tons per hour, depending on the nature of the material. Other FERROFILTERS available for handling liquids and slurries.

Send for BULLETIN 56-E

S. G. FRANTZ CO., Inc.
Brunswick Pike & Kline Ave.
P. O. Box 1138 Trenton 6, N. J.

For more details circle NED-551 G7 on enclosed inquiry slip

Does jobs no drill can do... Does many jobs *better!*

Clark "HOLE-MAKER"

Produces round, true holes in CASTINGS, FORGINGS, BOILER PLATE, THIN SHEET STOCK, PIPE, TUBING, ETC.; Drills CROWNED, CYLINDRICAL, FLAT OR WEBBED SURFACES!

No triangular shaped holes, no grabbing on break-throughs, no "walking" on starts with the Clark "HOLE-MAKER"! Produces full-gauge holes from start to finish. Removable pilot guides HOLE-MAKER straight and true even on intermittent cuts. Will also use pilot drill.

Ideal production tool on TURRET LATHES, CHUCKING MACHINES, RADIAL DRILLS, DRILL PRESSES, PORTABLE ELECTRIC and PNEUMATIC DRILLS. Excellent for rough boring, finishing and trepanning. Cuts all ferrous and non-ferrous metals and other materials. Saves money, replaces large drill inventory... Bores castings, forgings, etc. 3 to 10 times faster than single pointing!

5 ADJUSTABLE SIZES COVER I.D.'s from 1" to 6"
Specify straight shank or MT 2, 3, 4. Other tapers on order.

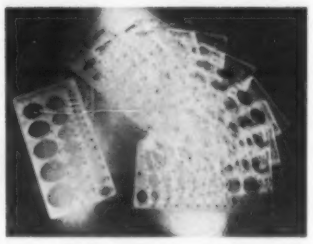
MODEL	CAPACITY
102	1"–2"
203	2"–3"
304	3"–4"
405	4"–5"
506	5"–6"

When ordering, specify material to be cut.

ROBERT H. CLARK COMPANY
9330 Santa Monica Blvd., Beverly Hills, Calif.

For more details circle NED-552 G7 on enclosed inquiry slip

ELLIPSE TEMPLATES
series of ten from 15 to 60 degrees



Ten templates comprise the No. 70 ellipse series and range from 15 to 60 degrees in 5-degree increments, with major axes from ¼ to 2 in. Templates from 15 to 45 degrees contain 29 ellipses each, with 1/32-in. increments from ¼ to ½-in., 1/16-in. from 9/16 to 1½ in. and ⅛-in. from 1⅝ to 2 in. The 50, 55 and 60-degree templates have 27 ellipses each, from ¼ to ½-in. by 1/32-in.; 9/16 to 1¼ in. by 1/16-in.; and 1⅜ to 2 in. by ⅛-in. increments. The 0.030-in. matte finish plastic templates are precision cut and measure 5 x 9⅞ in. Set sells for $18.50 and individual templates are $2.00 each. Made by **Rapidesign, Inc.**, Box 592A, Glendale, Calif.

For more details circle NED-553 G7 on enclosed inquiry slip

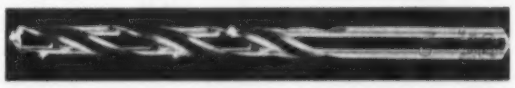
BOX WRENCHES
for heavy industrial work

Forged from high alloy steel, heat treated and machined for perfect size fit, this line of heavy duty box end wrenches is available for heavy industrial work. Nine new sizes are available, extending size range from ¾ to 3½-in. opening. All have 12 points and accurately broached openings to eliminate spreading or slippage under pressure. Entire line is available with straight handles and handle extension, and most sizes are offered in 15-degree offset or double offset series. Made by **Owatonna Tool Co.**, 436 N. Cedar St., Owatonna, Minn.

For more details circle NED-554 G7 on enclosed inquiry slip

TUNGSTEN DRILLS
offered in 1/64 to ½-in. sizes

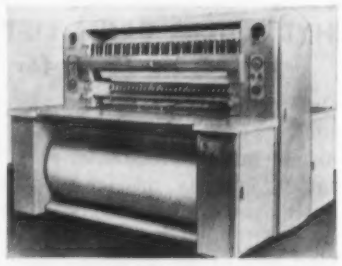
Made in Sheffield, England of 18 per cent tungsten Qualcut steel, line of drills features ground, lapped and polished flutes. Drills are available in 1 to 80



wire gage sizes, letter sizes A to Z and fractional sizes 1/64 to ½ in. Long stage heat treatment assures tool toughness and long life. Price is that of regular high-speed drills. Distributed by **Air Transport Equipment, Inc.**, Dept. NE, Albany Ave., Amityville, N. Y.

For more details circle NED-555 G7 on enclosed inquiry slip

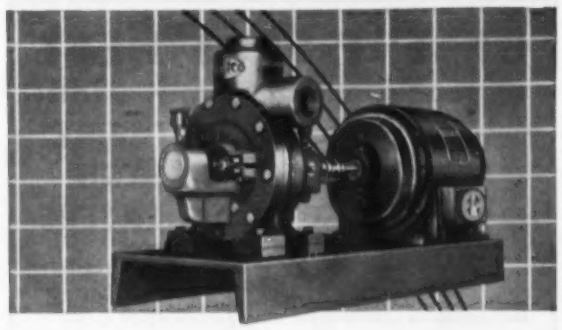
WHITEPRINT MACHINE
produces prints up to 54 in. wide at speeds up to 125 fpm



Diazo type whiteprints up to 54 in. wide are produced at electronically controlled speeds up to 125 fpm by this Hi-Q Diazoprocesser. A high-pressure, mercury-vapor lamp, rated 150 w per inch makes the high printing speed possible. Lamp wattage is adjustable from 5000 to 9000 w. Cooling system of 8½-in. diameter cylinder allows operation at 60° F above room temperature.

Two operators can work at feed board at the same time, printing two types of materials up to 24 in. wide, each with separate timing. Motordriven turret handles five rolls of sensitized material up to 500 yd long. Prints are delivered face-up at front of machine as well as at the rear. A Formica-topped trim table for continuous yardage is built to specification up to 10 ft long. Machine operates on 220 v single-phase 60-cycles, 90 amp. Made by **Tecnifax Corp.**, 5101 High St., Holyoke, Mass.

For more details circle NED-556 G7 on enclosed inquiry slip



When heads vary...

Install Fairbanks-Morse Westco peripheral pumps for peak efficiency.

These pumps deliver approximately the same capacity when discharging against high pressure or low pressure—and all at 1750 rpm.! Multi-vaned impeller gives multi-stage performance from a single-stage pump. Ideal as integral parts of machines, units or systems—for circulating hot water, ice water or brine—or for clear water, sump, solvents or chemical fluids, feeding filters or boilers, or for booster service. Capacities to 200 gpm., heads to 600 feet.

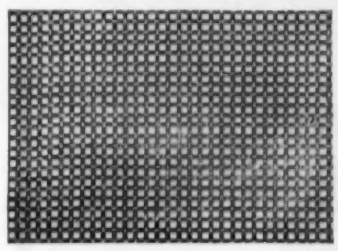
See your F-M Pump Dealer or write Fairbanks, Morse & Co., Dept. NED-7, 600 S. Michigan Ave., Chicago 5, Ill.

FAIRBANKS-MORSE
a name worth remembering when you want the BEST

PUMPS · SCALES · DIESEL LOCOMOTIVES AND ENGINES · ELECTRICAL MACHINERY
RAIL CARS · HOME WATER SERVICE EQUIPMENT · MOWERS · MAGNETOS

For more details circle NED-557 G7 on enclosed inquiry slip

INDUSTRIAL WIRE CLOTH



any mesh... any weave... any metal

Whatever your requirements for industrial wire cloth or space screens — fabricating, filtering, screening, grading, cleaning, processing—CF&I can supply you with the right cloth for your job. Popular types are carried in large stocks—or you can order to your specifications. And remember, CF&I engineers are always ready to help you with your special screening problems.

FREE CATALOG — an information-packed, 44-page book on CF&I Industrial Wire Cloth that's yours for the asking. Data on mesh and wire sizes . . . metals and coatings . . . complete description of special cloths . . . wire gauge conversion tables . . . U.S. Standard Test Sieve specifications . . . complete ordering information — an invaluable source book on all types of industrial wire cloth and space screens. To get your free copy, write to Sales and Engineering, 56 Sterling St., Clinton, Mass., or 1080 19th Avenue, Oakland, Calif.

4234

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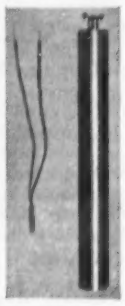
For more details circle NED-558 G7 on enclosed inquiry slip

ON THE SPOT HEAT
to your exacting requirements!

TRENT STRIP HEATERS
for Ovens, Dryers, Kettles, Process Equipment

- Flat Metallic Tube Casing
- Ceramic Block Terminal Blocks
- No Grooves—No Heat Distortion
- Sealed End Construction

Available in a complete range of types and sizes, wattage requirements, and voltage conditions—for maximum safe surface temperatures of 750°F. and 1000°F!



TRENT CARTRIDGE HEATERS
for Dies, Molds, Platens, Sealers, Defrosting

- Brass or Steel Sheath Construction
- Silver Soldered End Opposite Terminals
- Moisture and Wax Resistant
- Nickel Chromium Heater Coil Sealed in Ceramic Insulation
- Brass Angle, Pigtail, Rod, or Stud Type Terminals

Standard sizes from ⅛" to 1⅝" diameter, and 1½" to 22" in length, are supplied in a range of wattage requirements for 110 and 220 volt operation.

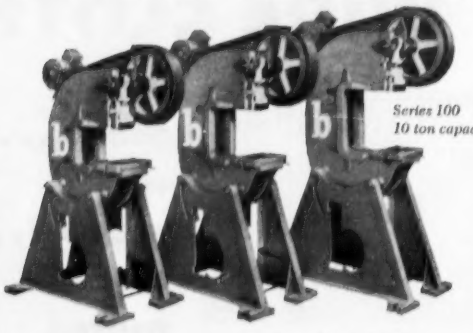
Discuss your spot heating requirements with a Trent representative.

Trent Representatives in Principal Cities Coast to Coast

TRENT INC.
Electrically Heated Industrial Equipment
242 LEVERINGTON AVE., PHILA. 27, PA.
In Canada Supreme Power Supplies Limited Toronto 14

For more details circle NED-559 G7 on enclosed inquiry slip

3 NEW HEAVYWEIGHT CHAMPS in benchmaster's growing family!



Here they are... 3 exciting new Deep Throat Benchmasters built with all the pride and craftsmanship of the world's largest manufacturer of small presses and mills! These new models exceed all other Benchmasters in size, weight, work capacity and tonnage! With their sturdy, rigid frames you get all the latest refinements of Benchmaster's long experience in the field... *and remember 60% or more of all small presses sold are Benchmasters!*

For your deep throat requirements, for facilitating large pieces easier, use these new 10-ton Benchmasters... Unmatched for quality, *still* unbeaten for economy!

1835 West Rosecrans, Gardena, California

benchmaster — World's largest manufacturer of small punch presses and mills

For more details circle NED-560 G7 on enclosed inquiry slip

NEW exclusive design!

T-J REAMERS

CUT REPLACEMENT COST MORE THAN HALF!

Exclusive in design . . . the New-type T-J Reamers cut your replacement costs to *less than half!* Only the quickly installed *head* to replace, after buying original shank. Wide range of interchangeable heads from ½" to 2-3/4" inclusive, in 1/16" increments available . . . right or left hand spiral flutes. Tapered hole in head insures concentricity and *new* thread design assures a snug fit on smoothly tapered shank. Quick change of heads saves time. Head and arbor firmly locked together.

Left hand spiral, right hand cut. Right hand spiral, right hand cut.

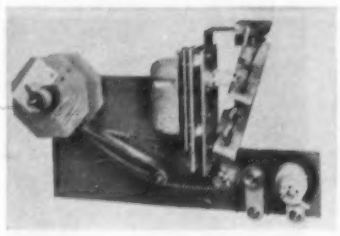
39 Years Experience

T-J TOMKINS-JOHNSON
RIVETERS · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS

The Tomkins-Johnson Co., Jackson, Michigan

For more details circle NED-561 G7 on enclosed inquiry slip

TAPING-DETAPING EQUIPMENT for capacitors, resistors and diodes

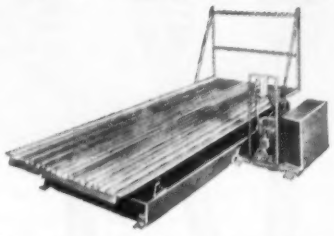


Line of taping and detaping equipment is suited for use by manufacturers supplying their capacitors, resistors and diodes on tape reels, as well as to firms using automatic insertion equipment and printed wiring on assembly lines. Oriented components are applied to pressure-sensitive tape. Taping equipment (shown) can also be used as an output device on automatic test equipment. Components meeting test requirements are automatically taped. Detaping equipment can be used as the input device, accepting components on reels, removing them from the tape and feeding them to the orienting chute on the automatic insertion equipment. Made by **Industrial Instruments Automation Corp.**, 89 Commerce Rd., Cedar Grove N. J.

For more details circle NED-562 G7 on enclosed inquiry slip

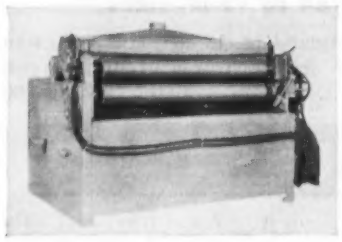
VIBRATION TESTER pretests for shipping damage

Occupying a floor space of 4½ x 6½ ft, the model 400-V Space-Saver vibration tester will pretest packages weighing up to 400 lb for possible shipping damage. It duplicates the motions encountered in actual shipment by freight car, truck or plane, pointing out potential weaknesses in package or product. Structural steel base of the tester carries a 42 x 42-in. table of 2-in. thick hard maple. Vibration is controlled through a variable speed drive. Fluorescent fixtures, radios, furniture and small pallet loads are among items which can be tested. Made by **Gaynes Engineering Co.**, 1652 W. Fulton St., Chicago 12, Ill.



For more details circle NED-563 G7 on enclosed inquiry slip

WOOD & METAL SANDER features 34-in. feeding height



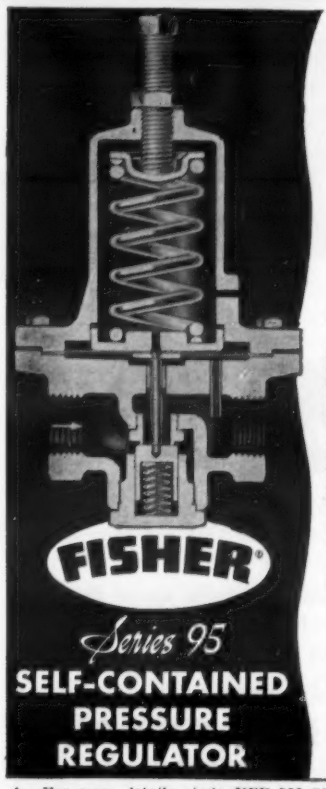
Fast, smooth wood sanding or metal finishing is performed by model SPL Speedsander. Unit's 34-in. feeding height enables integration into production or conveyorized finishing lines for sanding or polishing both sides in one pass. It has an automatic device which tracks wide abrasive belts by means of swivel tracking rolls. Feed speeds are up to 100 fpm, and finished materials are free from chatter or oscillation marks. This model is available in 24, 40, 50 and 60-in. widths. Made by **Timesavers, Inc.**, Dept. M-26, Box 7446, Robbinsdale Station, Minneapolis 22, Minn.

For more details circle NED-564 G7 on enclosed inquiry slip

HYDRAULIC DRUM LIFT lifts drum 72 in. for pouring

Greater ease in pouring contents of containers and drums into mixing vats, tanks, etc., is provided by the model BM 3 High Boy hydraulic drum lift. Unit lifts drums to 72-in. height, and is constructed of heavy square steel tube. Hydraulic jack is foot-pedal operated and will lift at rate of 1½ in. per pedal depression. Lifting capacity is 750 lb. Unit is mounted on 4-in. casters, has a floor lock and a drum lock to hold drums in pouring position. Release of drum lock permits rotating drum 360 degrees for mixing contents. Lift will handle either 55 or 30 gal drums or fiber containers up to 23 in. diameter. Made by **Sterling, Fleischman Co.**, Dept. NED, Box 94, Broomall 3, Pa.

For more details circle NED-565 G7 on enclosed inquiry slip



...A simple, sturdy, self-contained regulator that is suitable for steam, air, gas, oil, water and other fluids.

SERIES 95 features hardened stainless steel trim . . . flat seat . . . machine lapped seating surfaces for tight shut-off for high temperature steam service.

Also available with soft seat construction for low temperature service.

Sizes: ¼", ⅜", ½", ¾", 1". Outlet pressures from 2 to 30 PSI; 15 to 150 PSI. Size for size, compare its capacity.

Write for Bulletin C-95.

FISHER GOVERNOR CO. Marshalltown, Iowa
Canadian Plant: Woodstock, Ontario

WORLD LEADER IN RESEARCH FOR BETTER PRESSURE AND LIQUID LEVEL CONTROL

FISHER Series 95 SELF-CONTAINED PRESSURE REGULATOR

FISHER Since 1880

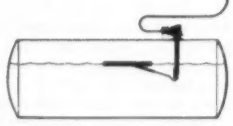
For more details circle NED-566 G7 on enclosed inquiry slip

100% AUTOMATIC TANK GAUGING

Dependable remote reading tank contents gauges using a closed hydraulic transmission system. No power required.

Several sizes available. Approved by Underwriters Laboratories and Factory Mutual. UL approved switches.

Write for complete details.

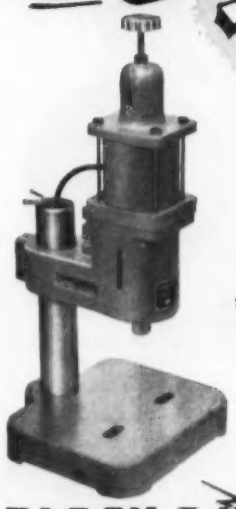


Since 1920 ... of proven quality

THE LIQUIDOMETER CORP.
LONG ISLAND CITY 1, NEW YORK

For more details circle NED-567 G7 on enclosed inquiry slip

with ELECTRO PUNCH



Lightning fast controlled impacts up to 10,000 lbs. . . . yet can be adjusted precisely enough to tap an egg *without breaking the shell.* Your guarantee of flawless production at speeds up to 120 blows a minute.

MARK • STAKE • SWAGE • BEND
CUT-OFF • RIVET • PUNCH

Write for free folder showing complete line of Black & Webster solenoid-operated production tools.

BLACK & WEBSTER, INC.
Dept. 1, 445 Watertown Street, Newton 58, Mass.
SOLENOID-OPERATED PRODUCTION TOOLS

For more details circle NED-568 G7 on enclosed inquiry slip

CONTRACT MANUFACTURING

For the first time in an 80-year history, the Troy Engine and Machine Co. is now making a general offer of Troy facilities for contract work. This complete modern manufacturing operation, including:

METAL WORKING
FERROUS & NON-FERROUS FOUNDRY
METAL FABRICATION AND ASSEMBLY
TOOL ROOM FACILITIES
SPECIAL ELECTRICAL DEPARTMENT

is now available for quality production and delivery of your sub-assemblies.

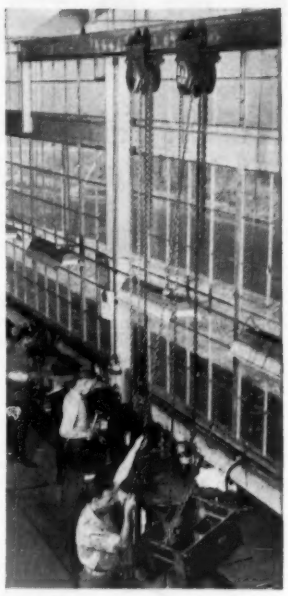
This is a unique opportunity for a few companies to broaden their facilities and capacity without capital investment.

Write, wire or telephone today for booklets "Production Facilities" and "Production Machine Tool List".

TROY ENGINE & MACHINE CO.
70 Parsons St. Troy, Pennsylvania
Telephone: Troy 32

For more details circle NED-569 G7 on enclosed inquiry slip

Peerless Packet Trolley Hoists cut handling time on assembly line



These integrated hoists and trolleys simplify handling of heavy parts on assembly lines. The worker just picks up the load, rolls it along an I-beam, lowers it on the bench top. Peerless Packet Trolley Hoists make lifting easy, cut handling time materially, require little maintenance. For more information about these time-saving and labor-easing trolley hoists, ask your authorized industrial distributor for Bulletin P-5. Or, if you prefer, write us.

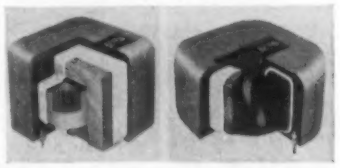
THE HARRINGTON COMPANY

Makers of Hoists Since 1876

GRAVERS ROAD AT THE TURNPIKE, PLYMOUTH MEETING 16, PA.

For more details circle NED-570 G7 on enclosed inquiry slip

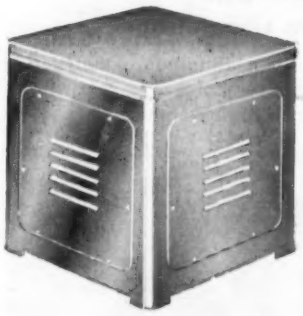
MAGNETIC COMPONENTS for wide variety of applications



Light weight, compactness and good environmental protection are features of standard and special PQ Magnetics. Magnetic component service offers the parts for magnetic amplifiers, modulators, voltage references, frequency multipliers, transformers, chokes and inductors. Among core materials are Deltamax, Permalloy, Supermalloy, Magnesil, Orthonal, Hypersil and Silectron. Various core, winding, insulation, terminal and fastening types are offered. Encapsulated, canned, Fosterite process, varnish dip and wax protection are available. Made by **ACF Industries, Inc.,** Avion Div., 7 Park Pl., Paramus, N. J.

For more details circle NED-572 G7 on enclosed inquiry slip

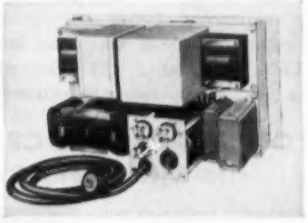
MACHINE BASES various sizes supplied knocked down



Steel plate from 3/16 to 5/16-in. thick is used in line of standard machine bases, supplied in knocked-down form. Sizes from 24 to 48 in. in length or width and from 24 to 54 in. high can be assembled. Parts are drilled for bolting together for welding. Made by **Inter-Lakes Engineering Co.,** 39202 Groesbeck Highway, Mt. Clemens, Mich.

For more details circle NED-573 G7 on enclosed inquiry slip

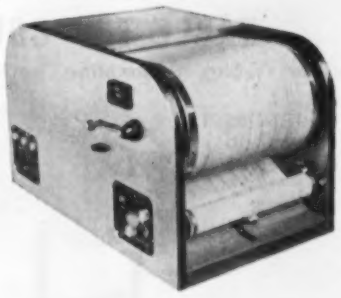
AUTOMATIC VOLTAGE REGULATOR for microwave relay and remote use



Constant output regardless of line voltage or load fluctuations is maintained by type TM7101 Stabiline automatic voltage regulator which has no tubes, transistors or moving parts. Unit is suited for microwave relay stations and remote installations, or for process applications where tube replacement would be costly or impossible. Both portable cabinet model and permanent type rack model have 6-ft cord-plug for input and receptacle for output connection. Input is 95-135 v, 60-cycles single-phase; whereas output is 115 v nominal, adjustable from 110 to 120 v. Load is 1 kva. Made by **Superior Electric Co.,** Dept. NED, 83 Laurel St., Bristol, Conn.

For more details circle NED-574 G7 on enclosed inquiry slip

wrinkle-free records



CEC's OSCILLOGRAM PROCESSOR

Get "on the spot" processing and wrinkle-free records in minutes. By far the leading processor in use today, CEC's 23-109 is a completely self-contained, motorized unit designed for daylight operation without a darkroom. No external water supply is needed. Easy to operate by inexperienced personnel, the 23-109 gives you many advantages including thermostatic control of solutions and drying drum, and greater record capacity (475 feet). Exclusive Teflon coated rollers permit even the thinnest papers to be processed without wrinkling. Contact your nearby CEC field office, or write for Bulletin CEC 1537-X23.

Consolidated Electrodynamics

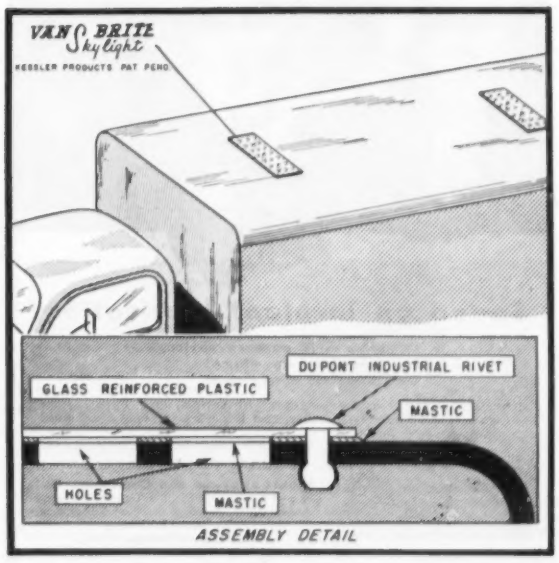
300 North Sierra Madre Villa, Pasadena, California

OFFICES IN PRINCIPAL CITIES THROUGHOUT THE WORLD

For more details circle NED-575 G7 on enclosed inquiry slip

New kit enables you to install skylights quickly and easily

Du Pont Industrial Blind Expansion Rivets help you do the job in minutes



This application may suggest another use for your products or a way you can speed up production.

Kessler Products Co. of 4521 Lake Park Road, Youngstown, Ohio, are currently marketing a do-it-yourself kit for installing skylights. The new kit contains two sheets of green-tinted glass-reinforced plastic, two tubes of mastic, one template and a box of Du Pont Industrial Rivets.

After circular holes are cut in a truck roof, Du Pont Rivets are installed to hold the skylight securely in place. Kessler Products said they chose Du Pont Rivets because they are easy to use, have a wide grip range and form a watertight seal. But there's a lot more to it than that.

- With Du Pont Rivets, one man can easily set 20-25 per minute. Working from the head end only, the rivets are expanded with an electrically heated Du Pont Riveting Iron or similar easy-to-use tool.
- Bucking bars are eliminated and there's no need for cutting, trimming or buffing after the rivets are set.
- The rivet shank expands, filling the hole and insuring tight contact throughout the thickness of the joint.
- Wide grip range permits use of one rivet size for fastening varying thicknesses of metal.

For more information on Du Pont Industrial Blind Expansion Rivets, call your jobber or write: E. I. du Pont de Nemours & Co. (Inc.), Explosives Dept., Wilmington 98, Delaware.

DU PONT INDUSTRIAL BLIND EXPANSION RIVETS

DU PONT *A Product of Du Pont Research*

Better Things for Better Living . . . through Chemistry

For more details circle NED-571 G7 on enclosed inquiry slip

Specify
MONARCH SOLID TIRES FOR EVERY LIFT TRUCK JOB

7804-MR

Mono-Cushion®

This high-performance tire, featuring the Monarch-developed heavy-duty lug tread, has outstanding shock absorbing capacity . . . is recommended for fragile loads and rough floors.

UNIVERSAL

An all-purpose workhorse, this utility tire is widely used for "average" lift truck jobs. It provides exceptional stability on high lifts and short turns plus good shock absorption.

TRACTION TREAD

Combining the inherent stability of a Universal with extra pulling power and traction, this lug tread tire performs for ton-mile after ton-mile at surprisingly low cost.

SPECIAL COMPOUNDS

Monarch also can supply special-purpose tires, with smooth or traction treads, on special order:
NEOPRENE . . . for extra resistance to oils, solvents, chemicals, extreme heat.
NON-MARKING . . . to eliminate smudges and skid marks on tile or painted floors.

FOR COMPLETE DETAILS, SPECIFICATIONS AND PRICES ...ask your truck dealer, or write, for new CATALOG & HANDBOOK MR-457

THE MONARCH RUBBER COMPANY
260 LINCOLN PARK
HARTVILLE, OHIO

- 7-255 Gen. Motors Bldg., Detroit, Mich.
- 1035 Bartlett St., Hayward, Calif.

For more details circle NED-576 G7 on enclosed inquiry slip

AN ECONOMY-PRICED

TABLE-TOP CONVEYOR

for sorting, assembling, packaging, inspecting

SERIES T44

VERSA-VEYOR

A smooth, dependable, quietly operating table-top conveyor with low initial and maintenance costs. Extensions can be added for over-all length of 81 feet. Available with or without side leaves . . . adjustable height. Rigid, enameled steel frame with durable 3-ply belt in widths from 6 to 24 inches. Choice of fixed belt speed within 3 to 100 F.P.M. range or variable speeds with 3-to-1 ratio. Moves packages and pieces at lowest cost.

WRITE FOR COMPLETE INFORMATION ON BELT CONVEYORS

THE BELT CORPORATION

5752 Stahl Road, Orient, Ohio

For more details circle NED-579 G7 on enclosed inquiry slip

BACHMAN 4-WAY

5 PORT VALVE
MODEL S-845 110 V.
$16.75

For control of double acting cylinders, separate exhaust ports give speed control in either direction or, if center port is used for exhaust, high and low pressures may be used for power and return cycle.

For automatic reciprocal applications this powerful, direct solenoid valve can be energized continuously or intermittently up to 500 cycles per minute. The solenoid closes with force of 14 lbs against a spring loading of 8 lbs, yet destructive impact and noise are minimized by resilient plastic laminate construction and light weight alumilite spool.

The model illustrated has 1/4" orifice, 1/4" pipe ports, is 8" long, and weighs 2 lbs. Inrush current, 4 amperes, holding, 25 watts. Standard O-ring seals are used for pressures to 200 psi. Bachman valves are not sensitive to dirt or maladjustment, and may be expected to give millions of cycles of dependable service. For intermediate speed changes, positive dwell or cushioning action a Bachman 3-way, 3 port divider valve, installed either on the supply or exhaust side, will suggest many combinations for automatic control.

Write for the name of local distributor or order direct with our guarantee of satisfaction.

JOHN D. BACHMAN & COMPANY

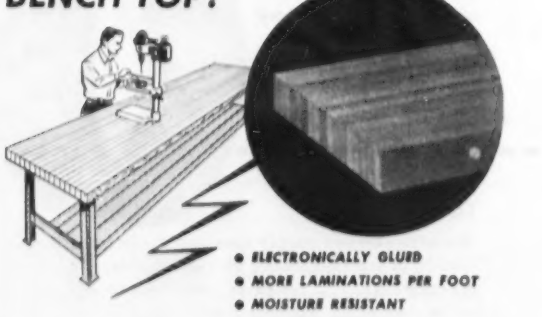
2300 SPARGER LANE BRISTOL, TENNESSEE

For more details circle NED-580 G7 on enclosed inquiry slip

LAMINATED BENCH TOPS

● *NOTHING—BUT NOTHING*

TOPS A TOLCO BENCH TOP!



● ELECTRONICALLY GLUED
● MORE LAMINATIONS PER FOOT
● MOISTURE RESISTANT

Tolco Northern Maple, laminated assembly bench tops are built by the originators of electronic gluing. Skilled craftsmen blend their talents with the finest quality lumber available to bring you the supreme product in the laminated bench and table top industry. Tolco tops have more laminations per board foot than any other giving them superior strength and resistance to wear and tear. Special processing makes Tolco tops especially resistant to moisture and warpage. Write today for full color catalog illustrating and describing this outstanding product. Prices on request.

THE TOLERTON COMPANY

P. O. Box K 658 Alliance, Ohio

Established 1894

For more details circle NED-581 G7 on enclosed inquiry slip

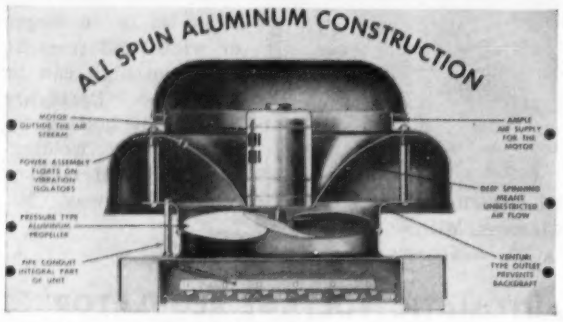
PRESSURE CONTROL
for up to 350 psi pressures

Two separate switches for controlling two independent circuits are embodied in the J75A dual switch pressure control. Seven models are offered in adjustable ranges between 0 and 250 psi limits, for maximum pressures up to 350 psi. On-off differentials are between 5 and 10 psi. Switches can set together to simulate double-pole circuitry. Normally open, normally closed, or double-throw styles with no neutral position are offered. Switches are rated 15 amp at 115 or 230 v ac. Direct current and 20-amp ac switches are available as well. Bellows is either brass or Monel, and mounting is by means of 1/8-in. male NPT pressure connection. Made by **United Electric Controls Co.**, 79 School St., Watertown 72, Mass.

For more details circle NED-582 G7 on enclosed inquiry slip

PROPELLER VENTILATORS
680 to 4040-cfm sizes in line

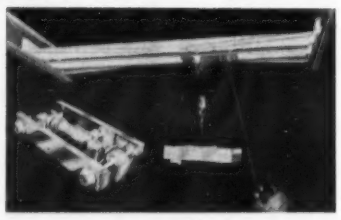
Aluminum propeller and spun aluminum construction of all other parts except the motor are features of type FD roof ventilator. Lightweight direct drive



unit has a pressure type propeller. Four sizes are rated from 680 to 4040 cfm. Two-speed and explosionproof types are available. Power assembly rests on rubber vibration isolators. Made by **Loren Cook Co.**, Dept. NED, Box 68, Berea, O.

For more details circle NED-583 G7 on enclosed inquiry slip

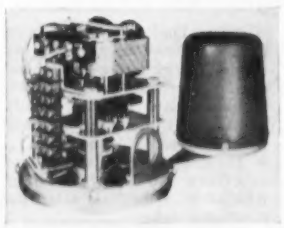
LOW HEADROOM CRANE
fits within height of 12 in.



Rated 2 tons capacity, this low headroom crane will fit into a 12-in. high area. It has an electric hoist and hand or power operated lateral mobility. The overhead crane can be furnished as a dolly or complete unit to specifications. Lift is up to 50 ft. Made by **Atlas Industrial Corp.**, 845-ND 39th St., Brooklyn 32, N. Y.

For more details circle NED-584 G7 on enclosed inquiry slip

SHAFT-MOUNTED GEARMOTOR
has built-in potentiometer and wide range of speeds and torques



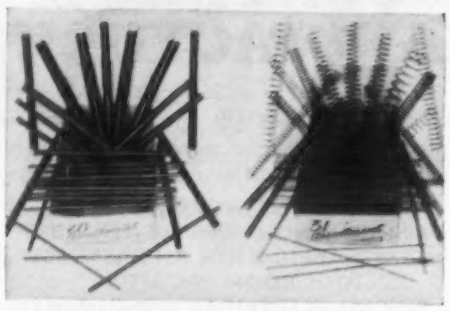
Remote electrical control with indication of position, speed, valve setting, etc., obtained on a calibrated meter is provided by the Shaftrol shaft-mounted gearmotor. A built - in potentiometer provides remote indication and control for valves, variable speed drives, gates, jacks and variable displacement pumps and may also serve in bridge circuits of automatic control systems.

Control can be by dial, pushbutton or automatically from limit switches, controllers or proportioning devices. Shaftrol mounts on 1/4 to 1-in. diameter shafts and has a torque arm. Wide range of speeds and torques is available in three or four-stage reduction gearing. Single or multi-turn potentiometers have a wide range of specifications.

Gearmotors are designed for use on single or three-phase circuits with dripproof, totally enclosed or explosionproof enclosures. Larger models can have built-in brakes. Made by **Jordan Co.**, Dept. NED, 3235 W. Hampton Ave., Milwaukee 9, Wis.

For more details circle NED-585 G7 on enclosed inquiry slip

Stock SPRING assortments



Our #28 (extension) and #31 (compression) Spring Assortment folders are now available and yours for the asking. Ideal for tool rooms and maintenance work.

To overcome the faults of ordinary assortments, which seem to contain "every spring except the one needed", design efforts were not confined to the springs alone; rather, loadings and dimensions were analyzed to assure the user of greater probability in having the correct spring on hand, whatever the application.

We also manufacture to special order.

Send samples or prints for quotation.

PARAGON SPRING COMPANY

4619 W. Fulton St. • Chicago 44, Ill.

For more details circle NED-586 G7 on enclosed inquiry slip

Free

Newest Stainless Tubing Catalog From Superior Tube

Catalog Section 21 on stainless steel tubing is a reference guide for designers, engineers, purchasing agents and manufacturers. It lists the wide variety of stainless steel analyses produced by Superior. Tables show chemical composition, physical and mechanical properties of each, with corrosion data specifically relating to stainless steel tubing. Technical data on soldering, brazing, welding, pickling, annealing, hardening, forming, bending and cutting is included.

Sections are devoted to tubing specialties, such as capillary, needle tubing, large OD thin-wall, super pressure, hypodermic needle, aircraft hydraulic, shaped and mechanical tubing.

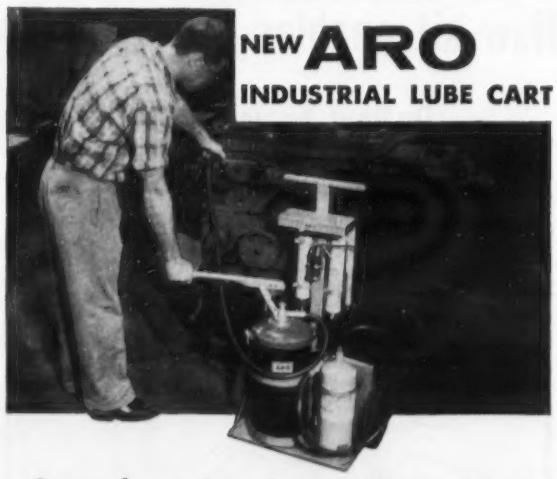
Write for your free copy of Catalog Section 21. Superior Tube Company, 2018 Germantown Ave., Norristown, Pa.

Superior Tube

The big name in small tubing
NORRISTOWN, PA.

All analyses .010 in. to 5/8 in. OD—certain analyses in light walls up to 2 1/2 in. OD

For more details circle NED-587 G7 on enclosed inquiry slip



NEW ARO INDUSTRIAL LUBE CART

Speed up in-plant lubrication!

Complete multi-purpose lubricator.
Portable—goes anywhere!
Cuts lube time to minimum.

Carries ARO-PAK for safer one-hand operation, fluid lubricant pump, hand gun, suction gun, hand oiler, and E-Z outs for replacing fittings.

See your industrial distributor or write for Bulletin No. 105.

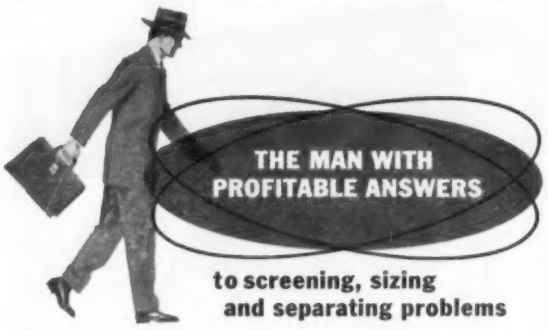
THE ARO EQUIPMENT CORPORATION
GENERAL OFFICES—BRYAN, OHIO

Plants at Bryan and Cleveland, Ohio
Aro of California, 3141 S. Grand Avenue, Los Angeles 7. . . Aro Equipment of Canada, Ltd., Toronto 15, Ontario
Offices in All Principal Cities

ARO INDUSTRIAL LUBE EQUIPMENT

ALSO . . . Air Tools . . . Air Hoists . . . Aircraft Products . . . Grease Fittings

For more details circle NED-588 G7 on enclosed inquiry slip



to screening, sizing and separating problems

The man with the answers is your nearby SWECO District Engineer. He'll show you how to get fast, accurate separation . . . with a SWECO Separator that tumbles materials in 3 directions at once over the entire screening surface.

SWECO 18" and 48" diameter Vibrating Screen Separators – with screen cloths ranging from 4 to 325 mesh – handle more than 200 materials . . . wet and dry, coarse and fine, heavy and light.

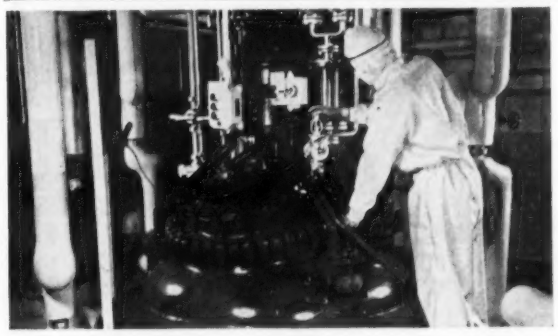
You'll find SWECO District Engineers in 26 major industrial centers in the United States, Canada and Mexico . . . available to demonstrate in your plant the accuracy and efficiency of SWECO Separators . . . to analyze your problems . . . to work out process and equipment needs without cost or obligation.

For a data file on screening applications in your industry . . . and a 22-page descriptive catalog on SWECO Separators, write for Bulletin S-103-175.

SWECO SEPARATORS

SOUTHWESTERN ENGINEERING CO.
4800 Santa Fe Avenue, Los Angeles 58, Calif.
LUdlow 3-6262 Cable: SWECOLA
Engineers and Constructors...Manufacturers

For more details circle NED-589 G7 on enclosed inquiry slip



***Glassed Steel* . . . your best protection against acids-alkalies**

Glassed steel by Pfaudler combines the corrosion resistance of glass with strength of steel. Moderate in cost, it has proved the best protection against corrosion or contamination.

Pfaudler acid-alkali-resistant glassed steel equipment is available in the following types:

Reactors in standard sizes from 5 to 4000 gals (also custom built to your needs), columns (Turbogrid and bubble-cap types), dryers, heat exchangers, storage tanks, stacks, pipe, fittings, valves, solvent recovery systems, etc.

If corrosion is a problem to you in your plant operation, ask for "1956 Buyer's Guide."

THE PFAUDLER CO.
Rochester 3, N. Y.

SPECIALISTS IN CORROSIONEERING

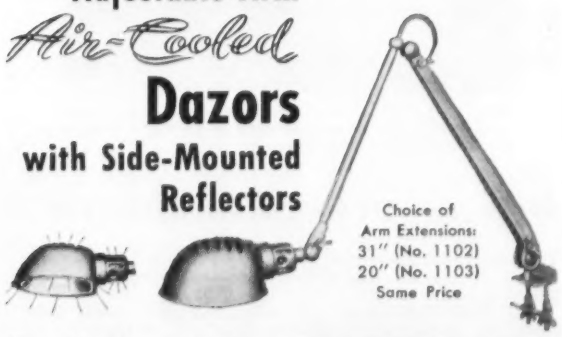
For more details circle NED-590 G7 on enclosed inquiry slip

For Hard-to-Light Machines . . . New Adjustable-Arm

Air-Cooled

Dazors

with Side-Mounted Reflectors



Choice of Arm Extensions:
31" (No. 1102)
20" (No. 1103)
Same Price

Now it's as easy to beam light into a recess, or around an offset, as onto a simple tool or bench position. This Adjustable-Arm Dazor with side-mounted reflector offers same low-cost air-cooled efficiency and positive tension control as top-mounted style. Uses 60-w bulb. Call your Dazor distributor. Dazor Manufacturing Corp. St. Louis 10, Missouri.

. . . Makers of

DAZOR FLOATING LAMPS

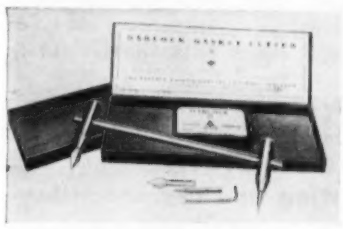
For more details circle NED-591 G7 on enclosed inquiry slip

KEY FILING DRAWER
unit fits in standard desk drawer

Keys are indexed, identified and filed neatly in the Ke-Drawer which fits into a standard desk drawer. Its cover must be down and closed, securing the keys, before the drawer can be shut. Each key is attached to a sturdy plastic tag for correct filing. Person in charge knows at a glance what keys are checked out. Capacity is up to 80 keys in four 20-key racks. A handle facilitates carrying the welded steel unit offered in various colors. Made by **Cushman & Denison Mfg. Co.**, 627 Eighth Ave., New York 11, N. Y.

For more details circle NED-592 G7 on enclosed inquiry slip

GASKET CUTTER
cuts 1¼ to 22¼-in. OD sizes



Round gaskets can be cut from asbestos, rubber, fiber or cork sheets by the B-set gasket cutter, also suited for precision scribing and layout work. It has a hexagonal shaped bar on which the knife and point holders are mounted. Adjustment permits cutting 1¼ to 22¼-in. OD gaskets. Samples of four sheet packings are included in kit. Made by **Garlock Packing Co.**, Dept. NED, 409 Main St., Palmyra, N. Y.

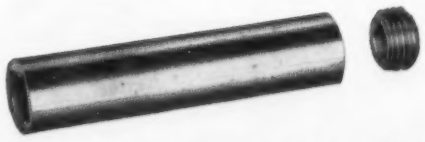
For more details circle NED-593 G7 on enclosed inquiry slip

POPPET-TYPE CONTROL VALVES
have instant action, high capacity

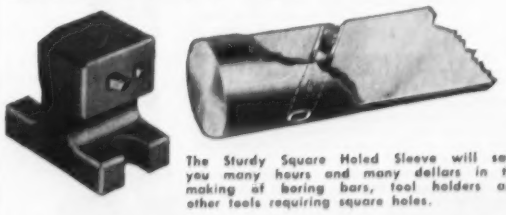
Almost instant response results from extremely short poppet travel of Hi-Speed Inline poppet control valves, designed for use on large brake, clutch and other devices. The fast response provides short machine cycle, accurate cuts on high speed cut-offs, minimum brake and clutch slip and fast machine setup. Valves are offered with integral pilots, or for remote pilot operation, in both two and three-way types, normally open or normally closed. Working pressures range from 10 to 200 psi, in 1, 1¼ and 1½-in. NPT sizes. Solenoid pilot coils for any voltage, ac or dc are available. Inline valves are also offered in ¼ to 1 in. sizes with standard solenoid pilots. Made by **Valvair Corp.**, 947 Beardsley Ave., Akron 11, O.

For more details circle NED-594 G7 on enclosed inquiry slip

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.



The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

SLEEVES MADE IN FOLLOWING SIZES:
3/16, ¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, 1"

STURDY BROACHING SERVICE, INC.
23514 TELEGRAPH RD., DETROIT 19, MICH.

Write for Literature

For more details circle NED-595 G7 on enclosed inquiry slip

DID YOU SAY small?

Occupying less than 1½ square inches of panel space, this Miniature Ceramic Switch nevertheless contains as many as **10 positions on a single wafer**. Flashover voltage at 60 cycles is 1000 volts peak . . . current carrying capacity is 2 amperes. And it's rugged . . . meets and exceeds Mil-Spec S-3786.

These units can be "ganged" with up to 8 decks with slight mechanical modifications. 2 or 3 poles per deck may also be obtained as standard. Prototypes can be delivered within 2 weeks.

Write for complete information.

THE **DAVEN** CO. 542 West Mt. Pleasant Ave. Route 10, Livingston, N. J.

For more details circle NED-596 G7 on enclosed inquiry slip

NOW YOU CAN

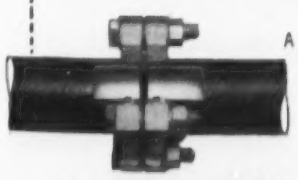
CARRY A SPARE...

for rubber lined piping systems

Rubber lined piping has more than proven its superiority in thousands of anti corrosion and anti abrasive applications. However, as in any piping system, occasional repairs are necessary.

Heretofore, these repairs meant shutting down the line, sending detailed drawings for new pipe and an indefinite period of waiting during which both production output and financial income suffered.

Now, with the La Favorite "Fieldlink"® method of joining rubber lined pipe, the ailing section, whether it be a single section, or hundreds of feet, can be easily replaced without so much as the loss of a days production.



A pressure proof connection can be effected in only 2 minutes the Fieldlink way.

Prepared pipe and fittings are available from stock in 20 foot lengths. Additional lengths can be quickly prepared at your own plant by any pipe fitter, on any standard pipe machine.

(If required, grooving and counterboring tools can be obtained from La Favorite)

LA FAVORITE *Rubber Mfg. Co.*

273 Wagaraw Road • Hawthorne, New Jersey

Yes, I want to know more about the Fieldlink method of joining rubber lined pipe in my own plant.

CLIP THIS COUPON FOR A BIG DIVIDEND

☐ Send me descriptive bulletin 2956 ☐ Send a representative to explain in person

NAME..... POSITION.....
COMPANY..... ADDRESS.....
CITY..... STATE.....

For more details circle NED-597 G7 on enclosed inquiry slip

cut production costs with SEL-LOK spring pins

SEL-LOK spring pins materially reduce production costs, because you simply drive them in plain drilled holes with either hand or automatic assembly tools. They eliminate expensive close-tolerance tapping, reaming, peening and milling operations, with the associated rejects and waste. Once a SEL-LOK is installed, it stays put—the hollow split tube flexes to absorb vibration and shock. SEL-LOK spring pins are available at your authorized industrial distributor's in sizes ranging from 1/16 by 3/16 to 1/2 by 5 in., in heat treated alloy or corrosion resistant steel. Write us for Bulletin 2014 and samples. Sel-Lok Spring Pin Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.
SEL-LOK SPRING PIN DIVISION
SPS
JENKINTOWN PENNSYLVANIA

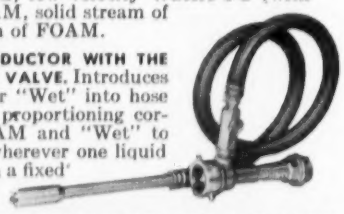
▲ For more details circle NED-598 G7 on enclosed inquiry slip ▲

Rockwood DOUBLE-STRENGTH Foam Smothers 'Em All!

Gasoline • Fuel Oil
Jet Fuel • Crude Oils
and other
Petroleum Derivative Fires

Team DOUBLE-STRENGTH Foam with these two Rockwood fire killers

TYPE SG-60 NOZZLE. A true all-purpose nozzle that fights fire 5 ways. It discharges high velocity WaterFOG, low velocity WaterFOG (with applicator), FogFOAM, solid stream of water or solid stream of FOAM.



FOAM AND "WET" EDUCTOR WITH THE FW METERING-CHECK VALVE. Introduces Rockwood FOAM or "Wet" into hose lines, automatically proportioning correct amount of FOAM and "Wet" to water. Also usable wherever one liquid is fed into another on a fixed percentage basis.

ROCKWOOD SPRINKLER COMPANY
Engineers Water . . . to Cut Fire Losses
Portable Fire Protection Division
2122 HARLOW STREET, WORCESTER 5, MASSACHUSETTS

▲ For more details circle NED-599 G7 on enclosed inquiry slip ▲

Here's an important new addition to the field of surface temperature instrumentation. It's the new Alnor wall-mounted pyrometer with flexible arm.

The Type R-4200 Pyrometer combines the convenience of a portable and the instrument protection of a wall-mounted unit. It enables a manufacturer with a battery of ovens, platens, molds, etc., to locate a surface instrument permanently at each station for production checking of surface temperatures. Quickly and inexpensively attached to instrument board or any wall surface.

Available with flexible arm and choice of ten thermocouples in standard Fahrenheit ranges from 0-400° to 0-2000°. Centrigrade equivalents and special ranges, including below zero temperatures, also available.

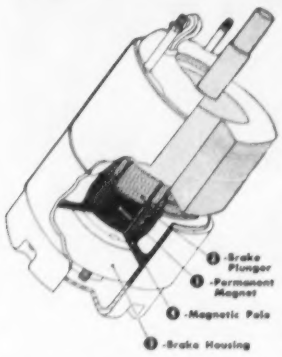
Write for Bulletin 2569. Illinois Testing Laboratories, Inc., Room 529, 420 No. LaSalle St., Chicago 10, Illinois.

Alnor
PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle NED-600 G7 on enclosed inquiry slip ▲

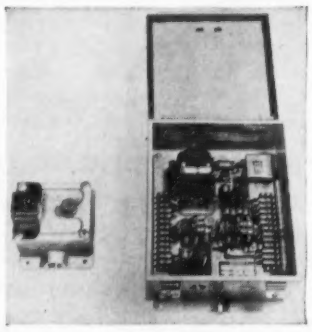
MECHANICAL BRAKE MOTOR braking torque externally adjusted

Precision stopping, braking overhauling loads, holding, stopping motor coasting between operations and hoist braking are applications for 1/2 to 3 hp Cle-Matic polyphase motor with an automatic built-in mechanical brake. Magnetic field of the stator releases the brake when starting, and the permanent magnet applies the braking force when the current is turned off. Braking torque is easily adjusted from the outside with a screwdriver. Brake torque ranges in frame 56 motors are up to 12 lb-ft and up to 45 lb-ft in frames 203 to 225. Brake adds 2 1/2 in. to fractional frame sizes and 2 7/8 in. to frame 203 to 225 motors. Former are now in production, latter will be offered soon. Various mountings and enclosures are offered. Motor is available in 900, 1200, 1800 rpm and some slower and multispeed designs. Made by **Cleveland Electric Motor Co.**, Dept. NED, 5213 Chester Ave., Cleveland 3, O.



▲ For more details circle NED-601 G7 on enclosed inquiry slip ▲

VIBRATION MONITOR SYSTEM protects rotating and reciprocating pumps, motors, engines and turbines



Pumps, motors, blowers, compressors, centrifuges, engines, turbines and other rotating or reciprocating equipment can be protected from vibrational faults by this nonelectronic vibration monitor system. A model 65 malfunction detector, for mounting on the equipment, and the new model 651 alternating current, oil-tight control unit, comprise the system. Latter is wired to detector through 3/4-in. conduit.

Detector is designed for Class I, Group D and Class II, Groups F and G locations. It trips whenever vibration exceeds preset level. The control unit must reset the detector in rapid sequence several times before shutdown time delay relay will actuate. Unit is held inoperative for up to 120 seconds after starting to allow the protected equipment to reach full speed. The control unit is available for 115, 230 or 460 v ac circuits, as well as for direct current circuits. Made by **Robertshaw-Fulton Controls Co.**, Fielden Instrument Div., 2902 N. Fourth St., Philadelphia 33, Pa.

▲ For more details circle NED-602 G7 on enclosed inquiry slip ▲

Get Improved Level Control with Masoneilan 12000 Series Liquid Level Controllers

Here's a complete, one source solution for level control of all types of liquids. 12000 Series offers unusually wide selection of ranges — spans from 14" to 120" and longer. Plus, wide choice of pressure ratings and selection of materials for handling practically all applications.

Wide variety of control types: Proportional, proportional-reset, differential-gap; plus pneumatic set for remote adjustment of set point. Full selection of mounting connections to meet vessel requirements.

SEND FOR CATALOG . . . Complete data on Liquid Level Control principles, construction, operation, applications and specifications. Look to Masoneilan Controls to solve your problem.

MASON-NEILAN
Division of Worthington Corporation
69 Nahatan Street, Norwood, Massachusetts
Complete Line of Control Valves, Control Instruments, Regulators, Liquid Level Controllers and Special Process Control Equipment.

▲ For more details circle NED-603 G7 on enclosed inquiry slip ▲

For the intimate MIXING of floury, powdery, granular and fibrous materials

Write for Bulletin 128.

SPROUT-WALDRON
HORIZONTAL BATCH MIXERS

This equipment loads, blends, and discharges rapidly . . . is sanitary, dustless. Handles dry and damp materials . . . and liquids can be added. Ideal for the rapid, intimate mixing of small percentages of critical ingredients with a large bulk of basic material. Sizes from 1 cu. ft. to over 1,000 cu. ft. Construction materials and discharge gates to meet all applications. Available with heating, drying, and cooling attachments. Can be "adaptioneered" for special needs.

Sprout-Waldron also offers a complete line of vertical mixers. Write for details.

IN/496

SPROUT-WALDRON
— Manufacturing Engineers Since 1866 —
8 LOGAN STREET • MUNCY, PA.
EQUIPMENT FOR SIZE REDUCTION • MIXING & BLENDING • BULK MATERIALS HANDLING • PELLETING & CUBING • PRODUCT CLASSIFICATION

▲ For more details circle NED-604 G7 on enclosed inquiry slip ▲

ANNOUNCING

New Thor Electric Screwdrivers and Nutsetters

100% MORE POWERFUL

25% LIGHTER

This is a Thor "EB" screwdriver with lever throttle used in a subassembly operation. When used with a precision Thor balancer this tool is at the exact spot the operator desires.

On-the-job tests bring acclaim from users!

Thor doubled the power in the completely new "EB" series of electric screwdrivers and nutsetters—and reduced the weight by one-fourth.

The Thor "EB" series was given thorough testing before release on assembly and sub-assembly lines of appliance and electronic manufacturers. Easy handling and stepped-up power were praised by the manufacturers who put Thor "EB" tools thru the paces.

In the No. 10 capacity class, the "EB" series is available with toggle or lever switches in speeds of 500, 1000, 1500 and 2500 r.p.m. Attachments include double-slip clutch and new Thor Uni-Tork clutch for setting fasteners to a pre-determined torque.

Ball and needle-bearing construction, heavy duty gearing and quality Thor-built armatures are just a few of the 19 engineering improvements which insure long productive life from the new Thor "EB" series of tools. Your Thor distributor will be glad to demonstrate. Thor Power Tool Company, Prudential Plaza, Chicago 1, Illinois.

Thor PORTABLE POWER TOOLS

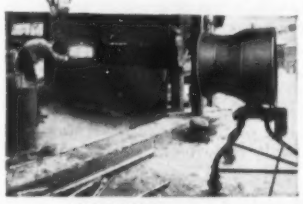
THOR POWER TOOL COMPANY
CHICAGO
Branches in all principal cities

▲ For more details circle NED-605 G7 on enclosed inquiry slip ▲

For Man-Cooling!

Coppus Airplane Type Heat Killer®

cools large areas — restores efficiency



HEAT KILLER on the job in drop forge plant.

Steel mills, drop forge plants, foundries and other plants with hot working conditions find this Coppus Heat Killer increases worker efficiency . . . at reasonable cost. *A single fan cools large areas.*

Other types also available for cooling furnaces, electrical equipment, for driving out gases, drying out products, drawing out fumes. Write now for detailed information. COPPUS ENGINEERING CORPORATION, 407 PARK AVENUE, WORCESTER 2, MASSACHUSETTS.

ANOTHER COPPUS "BLUE RIBBON" PRODUCT

For more details circle NED-606 G7 on enclosed inquiry slip

4 OPERATIONS ON ONE DRILL PRESS

SAVE PRODUCTION COSTS WITH . . .

quadrill

4 POSITION DRILLING & TAPPING TURRET HEAD

Holds four drills or cutting tools. One tool only operates when head is in operating position. Drills to full capacity of drill press. Send for complete information today. Be sure to specify size and make of drill press when ordering QUADRILL.

CHICAGO QUADRILL *Company*

1856 BUSSE HIGHWAY · DES PLAINES, ILL.

For more details circle NED-607 G7 on enclosed inquiry slip

YALE ELECTRIC TRUCKS

For smooth handling — Exclusive Magnetic Cam-O-Tactor controls acceleration, assures jolttless starts, shock-free travel.

For safe driving — Lowered cowl and "open-vision" uprights provide extra forward visibility.

For smooth, fast lifting — Side-thrust rollers reduce stress, compensate for off-center loading. New roller channel construction reduces friction in lifting and lowering.

Capacities: 1,000 to 150,000 lbs. For full facts, write The Yale & Towne Mfg. Co., Philadelphia 15, Pa., Dept. A-377A.

YALE* INDUSTRIAL LIFT TRUCKS AND HOISTS

*REG. U. S. PAT. OFF.

For more details circle NED-608 G7 on enclosed inquiry slip

MAGNETIC PICKUP
miniature unit weighs 4 grams

Generating electrical energy from mechanical motion without physical contact, this miniature magnetic pickup provides an output proportionate to the movement rate of a ferrous object. Sensitive transducer translates the movement into a variable and measurable alternating current voltage which can indicate motion, torque, rpm and vibrations; actuate electronic counters; synchronize machinery; control circuits and provide data for telemetering. It is usable in temperatures up to 250° F. Size is 7/8 x 1/4-in., with 6-in. leads. Body is stainless steel. Made by **Electro Products Laboratories, Inc.,** 4504 N. Ravenswood Ave., Chicago 40, Ill.

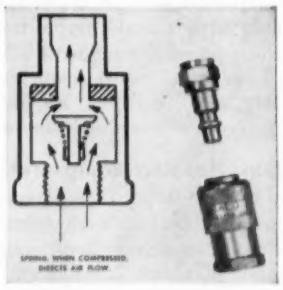
For more details circle NED-609 G7 on enclosed inquiry slip

DEMOUNTABLE DIE SEPARATOR
mounts on hydraulic lift tables

Heavy-duty welded steel demountable die separator is easily secured and mounted to base of Lexco hydraulic lift tables by four bolts. Cross bar has two clamps which are movable to fit any width die-set. The clamps are capable of suspending 2000-lb loads. Cross bar is 62 in. from floor. Device is shipped knocked-down with die clamps and mounting bolts included. Made by **Lexco Engineering & Mfg. Corp.,** Dept. DS, Box 161, Colmar, Pa.

For more details circle NED-610 G7 on enclosed inquiry slip

PNEUMATIC COUPLING
1/4-in. size passes 60 cfm at 100 psi



By directing the air flow around the compressed spring instead of through it, PT series pneumatic couplings have an air flow exceeding 60 cfm at 100 psi in the 1/4-in. size. The 3/8-in. size has a flow of over 100 cfm at 100 psi. Smallest model weighs only 2½ oz and has a maximum diameter of 15/16-in. Sleeve of the coupling does not have to be retracted to insert the connector, permitting one-hand use. Made by **Zalo Mfg. Co.,** Dept. NE, 4893 Van Epps Rd., Cleveland 9, O.

For more details circle NED-611 G7 on enclosed inquiry slip

Send for this NEW CRANE Plastic Piping Circular

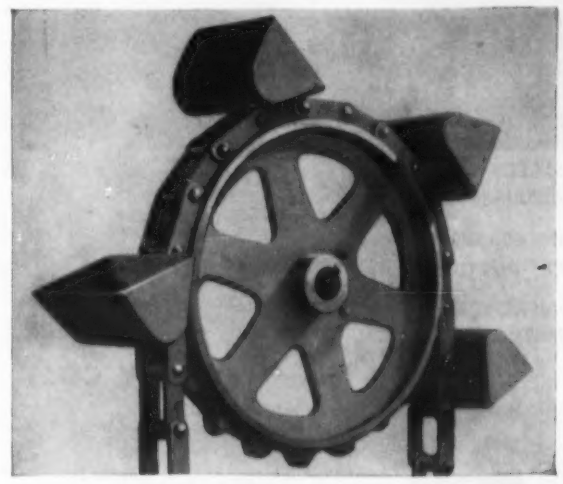
This new Crane circular gives complete specifications . . . service recommendations . . . sizes . . . weights . . . dimensions . . . pressure drop chart . . . pressure-temperature ratings . . . recommendations for pumping depths for flexible pipe . . . installation instructions . . . recommendations of fittings . . . and other helpful facts. To get your copy of Circular AD-2205, ask your Crane Representative, or write to address below.

CRANE PLASTIC PIPING

VALVES • FITTINGS • PIPE • PLUMBING • KITCHENS HEATING • AIR CONDITIONING

Crane Co., General Offices: Chicago 5, Ill. Branches and Wholesalers Serving All Areas

For more details circle NED-612 G7 on enclosed inquiry slip



Choose JEFFREY for long life!

Jeffrey chains, sprockets, pulleys, takeups and buckets are sound in design; materials and workmanship are the finest. Replace worn parts with dependable Jeffrey equipment. Stocked by Jeffrey distributors.

JEFFREY

THE JEFFREY MANUFACTURING COMPANY • COLUMBUS 16, OHIO

For more details circle NED-613 G7 on enclosed inquiry slip

HOW XEROGRAPHY and offset duplicating save $500,000 a year for the U. S. Army Signal Corps

Photo shows typical 24"x36" drawing. Subject is reduced onto offset paper master (right) by xerography to 11"x17" size for runoff of multiple copies on offset duplicator.

The Army Signal Supply Agency, Philadelphia, Pa., is saving more than $500,000 annually by the use of xerography and offset duplicating in reproducing engineering drawings for invitations for bids.

Approximately 200,000 invitations are mailed each year to some 15,000 suppliers. Each invitation contains documents setting forth contractual conditions, specifications, and drawings describing the item desired.

For the Army Signal Corps' dramatic mortar locator, the MPQ-10, for example, 65 suppliers were solicited, each receiving 1,973 drawings or a total of 128,245. The reproduction method formerly used would have required 250 manhours at a cost of $6,040. Using xerography and offset duplicating, job time was reduced to 107 hours and cost only $2,180.

Let us show you with facts and figures how xerography is cutting duplicating costs in business, industry, and government for all types of paperwork duplicating.

Anything written, printed, typed or drawn can be quickly copied by xerography onto masters for duplicating. Copies in the same, enlarged, or reduced size can be made from one or both sides of the original material, by this dry, photo-exact, electrostatic copying process. New developments make xerography the one, all-purpose, fast and economical process for copying onto different types of masters for duplicating.

WRITE for "proof-of-performance" folders showing how xerography is saving time and thousands of dollars for companies of all types, large and small.

THE HALOID COMPANY
57-64X Haloid Street, Rochester 3, N. Y.
BRANCH OFFICES IN PRINCIPAL U. S. CITIES AND IN TORONTO

HALOID XEROX®

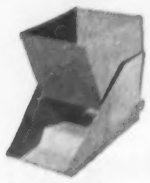
For more details circle NED-614 G7 on enclosed inquiry slip

THIS SMALL PARTS ASSEMBLY FEEDER

SPEEDS ASSEMBLY

INCREASES PRODUCTION

IMPROVES METHODS



THE NEW LOW COST

NESTIER®

MODEL 'M'

(Pat. Pending)

Write today for Bulletin M-349

Cut costs with "methods-engineered" Model 'M' feeders . . . the durable units which can be used in any assembly operation. Feeder boxes can be suspended from rack or will stack on each other, making use of rack optional . . . "stepped" insert in bottom effectively controls rate of parts flow to withdrawal area . . . feeder lip designed for most efficient parts withdrawal.

C-348-DN

NESTIER®

The Chas. Wm. Doepke Mfg. Co., Inc.

8864 Blue Ash Rd. • Rossmoyne, Ohio

For more details circle NED-615 G7 on enclosed inquiry slip

Cut inventory, maintenance, vibration, with Veelos, the adjustable V-belt!

Four 100' reels of Veelos (O, A, B, C widths) meet every V-belt need up to 316 sizes . . . store in *inches of space!*

CUT DOWN-TIME! Veelos is adjustable—no need to tear down outboard bearings, reset, tilt or move motors to make belt replacement or repairs. Tighten or change your Veelos belt by adding or removing links. No more waiting for a new belt, or new matched set when a belt gets loose!

CUT VIBRATION! Install Veelos in place of ordinary endless belts. Your Veelos salesman can prove, with the amazing Veelos Vibration Analyzer, that Veelos cuts vibration up to 90%!

Write for FREE Veelos Data Book to: MANHEIM MANUFACTURING & BELTING CO.

705 Stiegel St. Manheim, Pa.

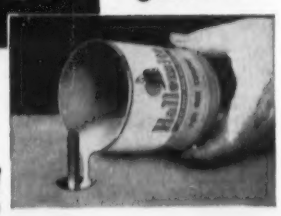
VEELOS THE PATENTED LINK V-BELT

Veelos is known as Veelink outside U.S.A.

For more details circle NED-616 G7 on enclosed inquiry slip

POR-ROK (POUR ROCK)

Fast Setting Cement



PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN 30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.

2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1937

For more details circle NED-617 G7 on enclosed inquiry slip

SECTIONALIZED TUBE FURNACE
heat treats wire, rod or strip steel

Sectional units either 5 or 11 ft long comprise this tube-type electric furnace for heat treating wire, rod or strip steel on a continuous-run schedule. Sections have their own integral controls and are easily connected to suit production needs. Material can be "held" at a given temperature for relatively long periods as it moves through the furnace, or special temperature zones can be established. Typical 11-ft long furnace has maximum operating temperature of 1250° F. In this unit, the hot zone is 10 ft long and has 6-in. diameter. Muffle is 6 in. ID alloy tubing for the full length. Power requirements are 30 kw, 220 v, 60 cycles, three-phase. Made by **Pereny Equipment Co.**, Chambers & Pereco Rds., Columbus 12, O.

For more details circle NED-618 G7 on enclosed inquiry slip

TEST PLUGS & SEALS
quick-closing type are reusable

Round, square and many special shapes of quick-closing, fast-adjusting reusable test plugs and seals expand in place firmly against irregularities of wall surface and shape. They make possible production pressure testing of tanks, molds, castings, tubes and other products. Snap-Tite type for low pressure testing adjusts to size with a cam lever and expands to seal when the lever is depressed. Turn-Tite type seals more tightly against higher pressures as its adjusting handle is turned. Latter type is adaptable to restricted clearance uses and is available with a male nipple for pressure hose connection. Both types are made of stainless steel, brass and zinc plated steel, with neoprene seals. Made by **Moeller Mfg. Co.**, Dept. 12, Racine, Wis.

For more details circle NED-619 G7 on enclosed inquiry slip

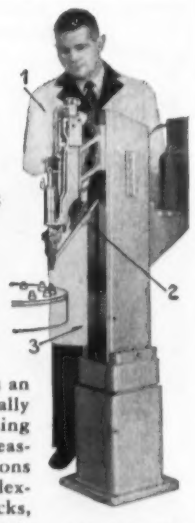
Gas Heating Equipment

Reznor Mfg. Co.—Suspended fan and blower type gas unit heaters with capacities from 25,000 to 300,000 Btu; Flexitemp floor model heater; two series of duct furnaces for system capacities from 50,000 to several million Btu; and PAC horizontal furnace in sizes from 50,000 to 125,000 Btu are described and illustrated in 16-page catalog GN-57. Application and installation data are given.

For more details circle NED-620 G7 on enclosed inquiry slip

New Standard DIXON "Auto-Positioner"

Simplifies Small Parts Assembly Operations at Rates Up To 7200 Per Hour



New Dixon "Auto-Positioner" combines three standardized units — (1) Automatic Air-Operated Positioner, (2) Automatic Escapement, (3) Mounting Structure — and now provides an economical solution to assembling a variety of small parts. It has an exclusive sensing feature that automatically stops your machines when parts are missing or malformed. "Auto-Positioners" are easily arranged at single or multiple stations with feeders, feed tracks, transfer or indexing tables. With properly tooled chucks, positioning punch, and proven feeder, parts are positioned at rates up to 7200 pieces per hour. Individual units or any combination of standard components available from stock. Tooled "Auto-Positioners" provided to suit needs.

Adapted to parts 1/4" to 3" O.D. Locates on adjacent stations 3" apart, or on 12-station dial with a 5" fixture radius.

WRITE FOR COMPLETE DATA Ask for full data on range of sizes and design features today.

DIXON

DIXON AUTOMATIC TOOL, INC.

2302 23RD AVENUE — ROCKFORD, ILL.

AUTOMATIC PARTS HANDLING AND ASSEMBLY EQUIPMENT

For more details circle NED-621 G7 on enclosed inquiry slip

CESCO...RIGHT—BEFORE YOUR EYES!

NEW lightweight, fiber glass CESCO Face Shield

No. 438-FT Face Shield

• The new CESCO No. 438-FT Face Shield is strong, rugged and light in weight. It is constructed of translucent fiber glass material and is easily tilted off the face. It has a wide range of uses where full facial protection is desirable.

The new face shield may be equipped with a new plastic headgear which adjusts to the required head size with just a turn or two of the ratchet. The new headgear is now available on all CESCO helmets and face shields.

CHICAGO EYE SHIELD COMPANY

2322 Warren Boulevard

Chicago 12, Illinois

CESCO FOR SAFETY

Ask your CESCO Safety Equipment Distributor to show you this new face shield and the many other new safety features of the CESCO line

For more details circle NED-622 G7 on enclosed inquiry slip

tricky

BENDS ARE EASY WITH PEDRICK BENDERS

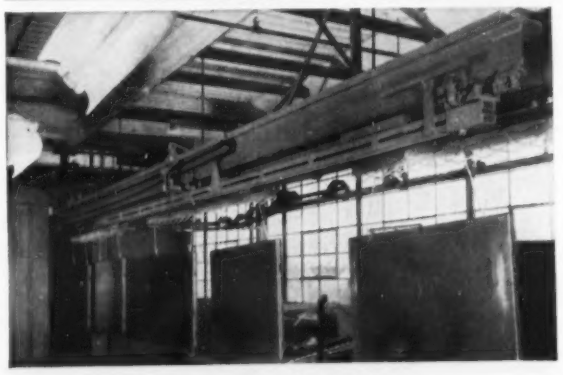
Complicated pipe, tube or structural metal bends are a cinch with Pedrick Production Benders—on either a production or job basis.

Show us your problem—with drawings, if possible—and we'll show you the answer. Write PEDRICK TOOL AND MACHINE CO., 3640 N. Lawrence St., Phila. 40, Pa. Dept. 6.

FREE "PEDRICK LINE" BULLETIN. WRITE TODAY.

PEDRICK production benders

For more details circle NED-623 G7 on enclosed inquiry slip



Automatic Finishing . . . Power LANDAHL and AMERICAN MONORAIL

Space was saved and automatic finishing achieved by combining two overhead handling systems.

American MonoRail cars carrying metal panels move through degreasing, priming, finishing and baking. In each operation either loading or unloading is performed automatically by power—the Landahl Chainless Conveyor acting as a "pusher" over most of the system. To cut your handling costs, write today.

AMERICAN MONORAIL COMPANY

13116 ATHENS AVENUE • CLEVELAND 7, OHIO

For more details circle NED-624 G7 on enclosed inquiry slip

Save up to 30% on Machinery Installation with UNISORB

You can save three ways by using Unisorb . . .
- Installation costs are cut up to 30%
- 80% saving in time
- No floor drilling, no bolts or lag screws

Plus . . .
Vibration is reduced up to 85%, machines work better, last longer. And, they can be moved anywhere, anytime.
Unisorb is impervious to oil and cleaning solutions. Permanent alignment, no "walking," precision shimming.

Send for FREE Sample and Facts Book—See how others have used Unisorb to save time and money. Use reader service card, write or call:

FE 7-11

The FELTERS Company
224 SOUTH STREET, BOSTON 11, MASS.
Manufacturers of Felt and Felt Products
OFFICES: New York, Philadelphia, Chicago, Detroit, St. Louis
SALES REPRESENTATIVE: San Francisco
Representatives in principal cities throughout the world

For more details circle NED-625 G7 on enclosed inquiry slip

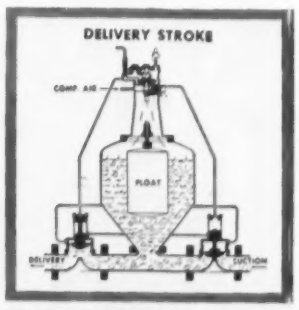
How to pump "handle with care" liquids and semisolids

New, air-operated *Ejectopump* works with a powerful yet gentle action—does not churn, whirl or chop the material being pumped. Whole grapes or even live goldfish can be pumped without damage. "Handle with care" liquids such as latex can be pumped without shear or turbulence. Inflammables can be pumped with safety since there are no electrical connections to cause sparks. Ideally suited for pumping highly abrasive and viscous liquids.

Ejectopump needs practically no maintenance. Has no rotating or reciprocating parts, no bearings, no packing, needs no lubrication.

Operation
Connect to compressed air line 30 to 50 psi. Handles discharge heads up to 100 ft., with maximum suction 20 ft. Pump is self-priming, may be installed above level of liquid pumped. Can be furnished in special alloys for pumping corrosives. Sizes: 1½", 2", 3", 4", 6".

WRITE TODAY for complete information and prices.



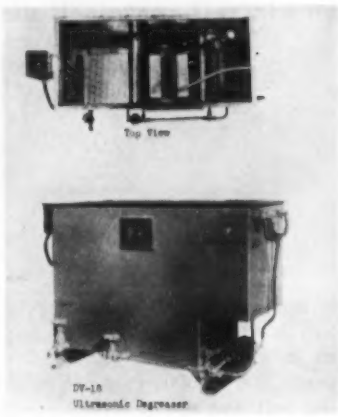
FERRO

FERRO CORPORATION
Supplies Division
4150 East 56th Street, Cleveland 5, Ohio

Ejectopump
COMPRESSED AIR OPERATED

For more details circle NED-626 G7 on enclosed inquiry slip

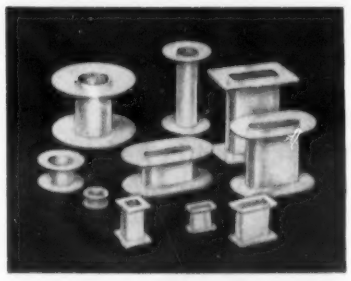
ULTRASONIC DEGREASER
has 9 x 9 x 6-in. work area



Ball bearings, watch and instrument parts, tools and dies and hydraulic valves are typical of parts that can be cleaned in the U-18 ultrasonic degreaser. Work area is 9 x 9 x 6 in., and capacity is 100 lb per hour. Built of stainless steel, it has thermostatic control, filter, manual spray, copper cooling coils, stainless steel heater and solvent recovery system. Made by **Ramco Equipment Corp.**, 1373 Lafayette Ave., New York 59, N. Y.

For more details circle NED-627 G7 on enclosed inquiry slip

NYLON COIL BOBBINS
small sizes in various shapes



Round, square, rectangular and oval shapes are stock forms of nylon coil bobbins available in sizes from ¼-in. diameter by ¼-in. long minimum, up to ⅞-in. Special sizes can be ordered. Properties of nylon include toughness, self-lubrication, high dielectric strength and insulating. Bobbins are usable in many electrical and electronic components. Kel-F, acetate, polystyrene and other thermoplastics can be specified. Made by **Gries Reproducer Corp.**, 143 Beechwood Ave., New Rochelle, N. Y.

For more details circle NED-628 G7 on enclosed inquiry slip

ROD PULLER
for long conduit lines

Rodding of long conduit lines where weight of rod is a controlling factor is facilitated by this rod puller. It can be used for either pulling or pushing by reversing the tool, and will work from any point in the rod. Made of malleable iron, puller is so designated that rod will not be cut or injured despite the great pressure puller exerts. Made by **T. J. Cope, Inc.**, Third & Walnut Sts., Collegeville 25, Pa.

For more details circle NED-629 G7 on enclosed inquiry slip

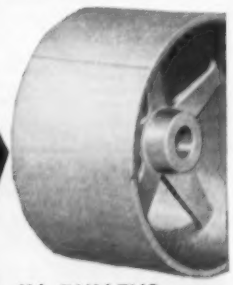
INCREASE TRANSMISSION EFFICIENCY
. . . LENGTHEN BELT LIFE
. . . STOP SLIPPAGE

Condersite Lagging is a high-friction pulley surface that increases grip, permits more slack, prevents heating and cracking of belts, reduces belt maintenance and eliminates need for dressing.

Condersite Lagging is quickly, easily applied in your plant by your men. No heat, no bolts, no rivets. Long lasting. Trouble free. For Crown, Flat or Split Pulleys.

Complete information sent free on request. Write Condersite Engineering Corp., 2013 Chancellor Street, Phila. 3, Pa.

DISTRIBUTORS IN PRINCIPAL CITIES
A FEW DESIRABLE TERRITORIES AVAILABLE



CONDERSITE
PULLEY LAGGING

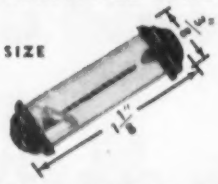
PUTS THE P-U-L-L IN PULLEYS

For more details circle NED-630 G7 on enclosed inquiry slip

NEW

LOW COST MERCURY SWITCH
MINIATURE TYPE

ACTUAL SIZE



HERMETICALLY SEALED

Introducing a new Mercoid hermetically sealed mercury switch—a tilting type switch designed to be installed in the same manner as a cartridge fuse (spring clips or holders can also be used for mounting purposes).

Operation is noiseless and contact position is readily visible.

Its small size and light weight make it particularly adaptable for such applications as business machines, coin operated machines, signals, sign flashers or refrigerator doors.

Electrical rating: SP-ST: 1.75 amp. 115 volts; 0.6 amp. 230 volts.

WRITE FOR BULLETIN 665

THE MERCOID CORPORATION
4209 Belmont Ave., Chicago 41, Ill.

For more details circle NED-631 G7 on enclosed inquiry slip

THIS CARTRIDGE IS EXPENDABLE.....

YOUR PLANT EQUIPMENT IS NOT, AFTER YOU INSTALL

BOWSER FIG. 835 FILTERS

Metalworking machinery, meters, valves, tools and other costly equipment is protected and more productive with Bowser filters in the lube or process-liquid lines.

Sizes from 2 to 100 sq. ft. Filter Area

BOWSER MICRO-FILTRATION POLISHES PROCESSED LIQUIDS

Edible oils, alcohols, lacquers and proprietary liquids are better finished with Bowser laminated cellulose cartridge filters.

Write For Fig. 835 Bulletin

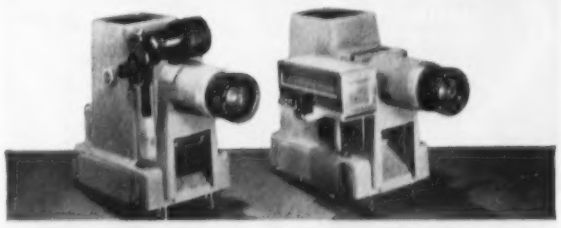
FILTERS PETROLEUMS AND ALL OTHER OILS; SOLVENTS, THINNERS, PROCESS AND METAL PLANT LIQUIDS

PRODUCT OF BOWSER RESEARCH

Sales and Service in Principal Cities
BOWSER, INC., 1300 E. CREIGHTON, FT. WAYNE, IND.

For more details circle NED-632 G7 on enclosed inquiry slip

KODASLIDE SIGNET PROJECTORS
have precision movements, handy controls, extra brightness, to help you show your slides and filmstrips with full effectiveness.



Slides and filmstrips work their *hardest* with these easy-to-use, versatile projectors

Make your slides and filmstrips work to full effect—show them with a Kodaslide Signet Projector.

Frames advance smoothly, and fast as a flick—even with cut or damaged film—thanks to the new, enclosed, nylon-geared Geneva mechanism. Sprocket teeth are visible for fast threading. Rapid rewind device.

Convenient controls let you concentrate comfortably on your *presentation*—not your projector. Special lenses and reflectors help deliver brilliant, sparkling pictures. Impeller-type blowers, aluminum panels, thick heat-absorbing glass assure cool, quiet performance. And you can convert from filmstrips to slides—and back—in seconds!

Signets are available in either 300- or 500-watt models, with lightweight carrying cases, if you wish.

Get full details—write for free pamphlet

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

Kodak

For more details circle NED-633 G7 on enclosed inquiry slip

what you should know about

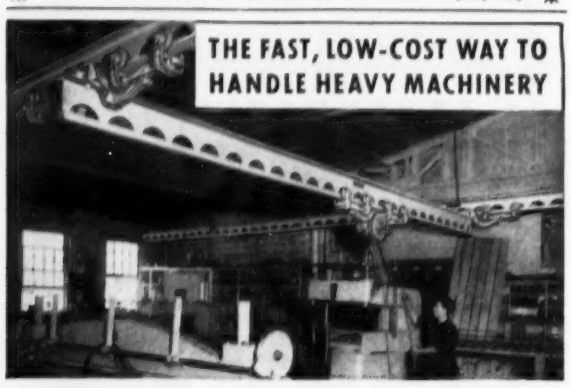
CLEARING SERIES-S PRESSES

it's all in the NEW CLEARING CATALOG

Clearing Series-S straight side presses give you the capacity and rigid construction for all types of drawing and heavy blanking operations, the precision that's required for progressive die work and lamination production. All the facts on these moderate priced, versatile machines are given in a colorful new 48 page catalog—complete specifications and full, accurate descriptions of construction and features. Write for it today.

CLEARING PRESSES THE WAY TO EFFICIENT MASS PRODUCTION
CLEARING MACHINE CORPORATION *Div. of U.S. Industries, Inc.*
6499 W. 65th Street • Chicago 38, Illinois Hamilton Plant • Hamilton, Ohio

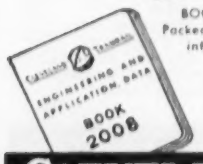
For more details circle NED-634 G7 on enclosed inquiry slip



Inexpensive Hand-Propelled Crane with Chain Hoist

If hard, back-breaking work is required on the part of several men to move a machine in your plant, you should seriously consider either hand-propelled or electric Cleveland Tramrail cranes. Work that requires hours can often be done in minutes with an overhead crane. Many cranes pay for themselves in only a few months time.

GET THIS BOOK!
BOOK No. 2008
Packed with valuable information...



CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6636 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

For more details circle NED-635 G7 on enclosed inquiry slip

ALL RECORDS VISIBLE AT A GLANCE!

WITH **DIEBOLD** Tra-Dex
VERTICAL • VISIBLE • FILES

Tra-dex is the only vertical-visible file that *expands 100% for fast, accurate drop-filing.* All types of signals can be used on horizontal, diagonal and vertical margins. Changing information is exposed constantly on vertical margins as a by-product of hand or machine posting. Size, design and color of forms are almost unlimited. Case histories show why Tra-dex is the world's most efficient, flexible and economical visible record system. Write for all the facts.

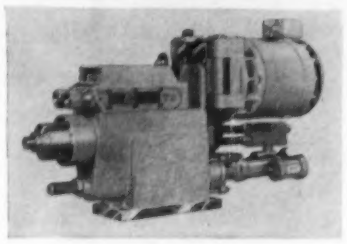
Maximum capacity in minimum space . . . two-tier cabinet houses up to 20,000 records. Mobile stands available.

$64,000 question Protected by **Diebold** INCORPORATED
1008 Mulberry Rd., S.E. Canton 2, Ohio

For more details circle NED-636 G7 on enclosed inquiry slip

HEAVY DUTY DRILL UNIT

35 spindle speeds are available in self-contained air-electric unit



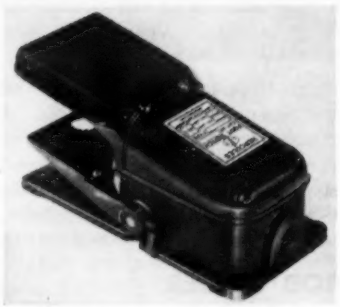
High speed drilling, reaming, counterboring, precision boring, spot facing and similar operations can be performed by the Carbi-Drill, a self-contained heavy duty drill unit. Tapping is done by adding a tapping head. The unit weighs 225 lb with a standard 2-hp motor and can be mounted in any position. Thirty-five spindle speeds from about 600 to 6000 rpm are available by changing timing belt and motor pulley.

Adjustable air-powered advance to work, controlled hydraulic spindle feed and adjustable air-powered rapid return are accomplished with a Bellows air motor and Hydro-Check inline power unit built into the base. Air motor supplies power thrust equal to ten times the applied air line pressure. Stroke length is adjustable from 1½ to 4 in. Drilling capacity is up to ⅝-in. diameter in mild steel. Unit is operable on single or continuous cycling. Made by **Bellows Co.**, 230 W. Market St., Akron 9, O.

For more details circle NED-637 G7 on enclosed inquiry slip

FOOT SWITCHES

40 models are included in heavy duty line for controlling machines



Riveting machines, welders, motors, solenoids, relays, presses and machine tools are among uses for Hercules line of heavy duty industrial foot switches. Designed for use as pilot devices in connection with control circuits of contactors or starters, they are also suited for direct control of small motors and other electrical devices.

They have cast iron enclosures, measure about 8 7/16 x 4 5/16 x 4½ in., and weigh from 7 to 11 lb. All have a safety guard and adjustable pedal position trip point. Electrical units are UL-approved. Line includes 40 models in momentary contact and maintained contact types. General purpose heavy duty; water tight NEMA Type 4 enclosure; explosion-proof type for Class 1, Group D, NEMA Type 7; and high direct current rated single, two or three stage classes, are available in each type. Made by **Linemaster Switch Corp.**, 432 Woodstock Terrace, Woodstock, Conn.

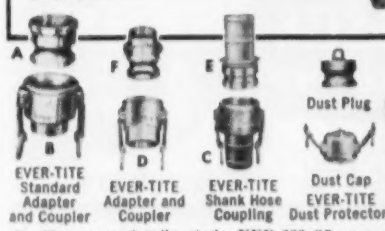
For more details circle NED-638 G7 on enclosed inquiry slip

Here's proof your best buy is
EVER-TITE
-the best quality quick couplings

Bronze
Aluminum
Stainless
Carbon
Malleable
Hastelloy

Speedy deliveries—no leaks.
Prolongs life of equipment.
EVER-TITE is the best—ask your distributor now.

EVER-TITE Coupling Co. Inc.
254 W. 54 St.
New York 19, N. Y.



Every EVER-TITE saves time and money

For more details circle NED-639 G7 on enclosed inquiry slip

NEW!
TEFLON® STIRRING GLAND AND ROTARY SEAL

Available in four sizes, 24/40, 29/42, 34/45, and 45/50, standard taper, and is supplied for either 6mm. or 10 mm. shafts or tubing. The body of the gland is Teflon® and is suitable for use with any materials except metallic sodium. The ASCO gland offers many advantages over mercury sealed stirrers or precision bore stirrers both pricewise and performance wise. The ASCO gland is vacuum tight to 5 x 10^{-6} mm. Hg. When used as a thermometer port it allows standard thermometers to be used with standard taper joints, and in addition allows depth regulation of the thermometer bulb. Gas entry tubes may be simply and properly adjusted to any flask with standard taper joints. ASCO glands are almost indestructible, chemically inert, wear compensating, and universal in use.

FEATURES:
- Teflon® construction
- Operates at temperatures as high as 200° C.
- Non-contaminating
- Non-breakable
- Will not "Freeze"
- Inner and Outer "O" ring seals
- May be used as a stopper
- Will not wear loose
- Thousands in use
- Pays for itself
- Requires no special shafts or tubing

PRICE, GLAND ONLY

24/40	$11.75 ea.
29/42	13.50 ea.
34/45	14.75 ea.
45/50	17.50 ea.

a|s c|o Available at better laboratory supply houses, or Dept. NED-7
ARTHUR F. SMITH COMPANY
311 Alexander St., Rochester 4, N. Y.

For more details circle NED-640 G7 on enclosed inquiry slip

CUT PLANT MAINTENANCE!

Automatic **LUNKENHEIMER OILERS** eliminate costly hand labor!

Fig. 1834 Constant Level Oil Control

Fig. 1815 Globe Body Bottle Oiler

Labor costs are far too high to permit economical hand-oiling—yet valuable bearings must be protected against damage! Install Lunkenheimer Bottle Oilers, Oil Cups, or Constant Level Oil Controls to feed oil automatically—prevent over-supply, leakage, spatter. Request literature from your Lunkenheimer Distributor or write The Lunkenheimer Co., Box 360, Annex Station, Cincinnati 14, Ohio.

Fig. 1300 Sight Feed Oil Cup

L-257-30

LUNKENHEIMER®
THE ONE *Great* NAME IN VALVES

For more details circle NED-641 G7 on enclosed inquiry slip

Telephone in *Quiet!* with a **BURGESS-MANNING** *"Hear-Here"* Booth

More than "just a phone booth," every Burgess-Manning "HEAR-HERE" Booth is a room of "Quiet." They have been carefully studied from an acoustic standpoint and you will completely eliminate all interfering outside noise when you step inside. And notice too—

- No doors — always fresh air
- No Corners — to sweep
- No glass — to break

There's a model and size to fully satisfy your particular need. No other Booths like the Burgess-Manning.

Performance Guaranteed

Write for Catalog—Bulletin

Architectural Products Division of
BURGESS-MANNING COMPANY
5968 Northwest Highway, Chicago 31, Illinois
Manufacturers of 3-Way Functional Ceilings and Acousti-Booths for Telephoning

For more details circle NED-642 G7 on enclosed inquiry slip

Permanently End Condensation Drip, Rust and Corrosion with NoDrip Plastic Coating!

Here is the inexpensive, easy way to solve your condensation problem once and for all. NoDrip plastic coating acts immediately to insulate and protect tanks, pipes, walls, ceilings, air ducts and other metal equipment against condensation drip, rust and corrosion. NoDrip can be applied by anyone without special experience with brush, trowel or spray. NoDrip is also resistant to acid, alkali and brine... protects concrete, brick, plaster, tile, wood or composition surfaces.

FREE

32-PAGE NoDrip DATA HANDBOOK Complete with photographs, charts and technical information to help solve your condensation problem. Write today!

Available at leading plumbing and mill supply houses

J. W. MORTELL COMPANY 526 Burch St., Kankakee, Ill.

For more details circle NED-643 G7 on enclosed inquiry slip

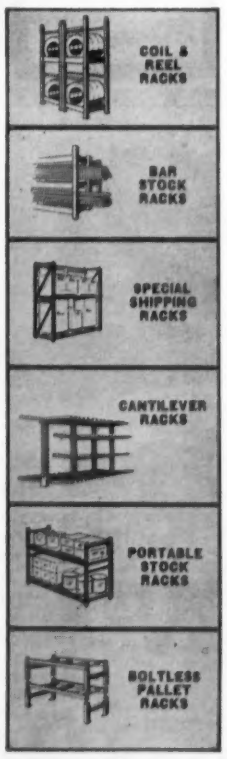
Shipping Problem? call EMI

anything can be "well stacked" or shipped on EMI racks

Big or little, strong or fragile, *anything* stacks or ships better on EMI quality racks. They protect stock, cut handling costs and speed inventory.

EMI RACKS are made of strong, tubular steel and are adjustable to fit any space or unit load. Special racks designed to your specifications with field engineering service on any installation.

Write for our illustrated catalog before you plan additional storage space or the purchase of stacking or shipping equipment.



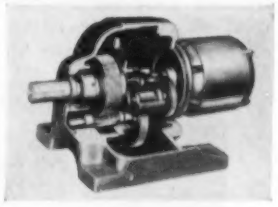
Well Stacked Racks for Industry

EQUIPMENT MFG. INC.

21566 HOOVER ROAD DETROIT 5, MICHIGAN

For more details circle NED-644 G7 on enclosed inquiry slip

PARALLEL SHAFT GEARMOTORS easily installed, space-saving



Both integrally-mounted and motor-coupled types are included in expanded line of parallel shaft gearmotors. The former are space-saving, easily installed power packages. They provide needed speed without additional transmission equipment. Motor-coupled types make it possible to change motors on the job without draining the oil. These units have splash lubrication of gear head parts and double-shield, permanently lubricated motor bearings. Housings are aluminum alloy. Made by **Electra Motors Inc.**, Dept. P I, 1108 N. Lemon St., Anaheim, Calif.

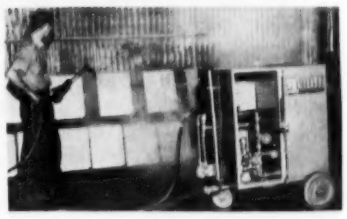
For more details circle NED-645 G7 on enclosed inquiry slip

RIGGING BLOCK rated for up to 14-ton loads

Practically shatter-proof heavy duty Rigger-Slusher block will withstand 14-ton dead loads and has wide flange to accommodate up to ¾-in. wire rope. Made of alloy steel, block has cast bead which keeps rope in groove, even when used in horizontal position. Other features are sealed roller bearings, large grease chambers and quick-opening design for easy handling in close quarters. It weighs 44 lb, and has roller or bronze bearings, 10-in. sheave diameter and swivel hook or stiff shackle. Made by **Sauerman Bros., Inc.**, Dept. NDC, 620 S. 28th Ave., Bellwood, Ill.

For more details circle NED-646 G7 on enclosed inquiry slip

FIRELESS STEAM CLEANER utilizes plant's live steam



Live steam from plant's regular steam lines is used by improved model 51 fireless steam cleaner. Unit's high velocity, 212° F solution cleans hard-to-reach corners and crevices; washes away grease, gum, syrup and corrosives from vats, racks, floors, walls and machinery; and sterilizes, deodorizes and disinfects. The variable volume pump balances cleaner capacity to available steam, enabling user to get up to 200 gph of solution at 100 psi. "Easy-squeeze" gun allows remote control. Release of grip stops pump instantly. Made by **Malsbary Mfg. Co.**, 845 92nd Ave., Oakland 3, Calif.

For more details circle NED-647 G7 on enclosed inquiry slip

"Allis-Chalmers fork trucks are tougher and require less maintenance" — says chief mechanic

"I think one reason the Allis-Chalmers trucks have outperformed the others is because they are easier to clean and service," continues Milt, the chief mechanic at Neenah Foundry Co., Neenah, Wisconsin.

"On checking with operating and maintenance departments," says J. P. Keating, vice-president, "we definitely feel your equipment is much better than competitive models. We therefore recommend it without reservation."

Let your Allis-Chalmers material handling dealer give you the complete story on why owners, operators, servicemen — *everyone* likes Allis-Chalmers fork trucks. Better yet, let him demonstrate one and you'll see for yourself.

ALLIS-CHALMERS, MATERIAL HANDLING DEPT., BUDA DIVISION, MILWAUKEE 1, WISCONSIN

ALLIS-CHALMERS

BH-43

For more details circle NED-648 G7 on enclosed inquiry slip

insta-release —that's the name for the easy-action release-lever Knu-Vise pliers. Pliers open instantly re-clamp quickly—easily—without waste motion.

Maintains control over the free-swinging handle—permitting re-clamping with the same grip. Always remains within the hand span of the user.

Flip it over and you have instant release in the other direction. The Knu-Vise *insta-release* lever is available on P-1200 and P-1800 Series pliers.

Remember: Every model of the more than 150 *Knu-Vise* clamps is quick to lock—and quick to open. Ask for a demonstration.

Manufacturers of over 150 models of manually and air-operated clamps and pliers

KNU-VISE PRODUCTS LAPEER MANUFACTURING CO.

3062 DAVISON ROAD • LAPEER, MICHIGAN

WESTERN DIVISION 422 Magnolia Glendale California • CANADIAN DIVISION Higginson Engr. Hamilton Ontario

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3 pole—Size 1 The Sign of QUALITY MOTOR CONTROL 3 pole—Sizes 4 & 5

ALLEN-BRADLEY CONTACTORS the ONE Complete Line

In all 9 sizes . . . from the small Size 00 (10 amps) to the husky Size 7 (900 amps) . . . A-B Bulletin 702 contactors have the same trouble free solenoid design. There is only ONE moving part . . . the plunger that carries the double break, silver alloy contacts which never need maintenance. For complete information, send for your A-B Handy Catalog.

Allen-Bradley Co.
1334 S. Second St., Milwaukee 4, Wis.
In Canada—
Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY
SOLENOID MOTOR CONTROL
QUALITY

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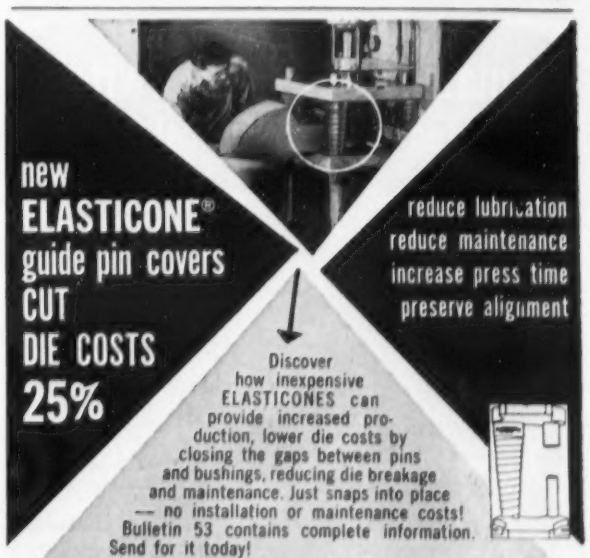


CENTRAL Safety Equipment Co.

6607 MARSDEN ST. PHILADELPHIA 35, PA.

For complete information on Elasticones and a copy of Bulletin 53 use convenient coupon.

Name____ Title____
Firm Name____
Address____
City____ Zone____ State____
NED-5-57

For more details circle NED-651 G7 on enclosed inquiry slip

measure fluid flow with these low-cost meters

BULL'S EYE SIGHT FLOW INDICATOR

See flow thru ½" thick bolted sight glass cover. Estimate flow rate visually.

MAGNASIGHT ALL-METAL FLOW RATE INDICATOR

Gives fairly accurate reading of high pressure flow through straight runs in limited space.

RATOSIGHT FLOW RATE INDICATOR

Glass scale shows flow rate changes instantly with reasonable accuracy. Good for "roomier" installations or at pipe turns.

ARMORED PURGE METER

Rugged, all-metal, indicating flowmeter for gas, oil, and other purge fluids under high pressure.

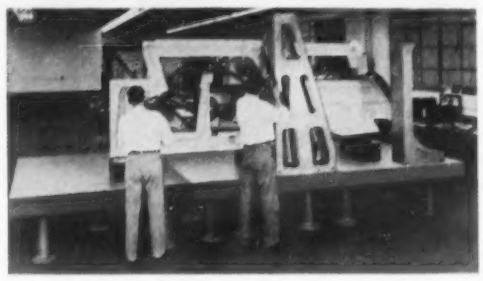
All of these inexpensive flowmeters, along with many highly accurate, more expensive models comprising the F&P flowmeter line, are available from stock for immediate shipment. Write for data on those that interest you.

FP FISCHER & PORTER COMPANY
3577 County Line Road, Hatboro, Pa.

For more details circle NED-652 G7 on enclosed inquiry slip

PLASTIC SURFACE PLATE
coating is applied over granite

Surface plate accurate within 0.002-in. total indicator reading of a true plane across its corners is made of fine grain granite in the rough, coated with a



plastic which gives a smooth hard surface. It can be used for such precision work as tools and dies, wood models, patterns and plastic tooling. Should a plate need repair or resurfacing, the user orders a new plate and trades in the old plate. Minor repairs can be made without complete resurfacing. Plate is available in eight standard sizes from 24 x 60-in. to 72 x 96 in. in 6, 8, 10 and 12-in. thicknesses. Made by **Renaud Plastics, Inc.**, 5422 S. Cedar Rd., Lansing 17, Mich.

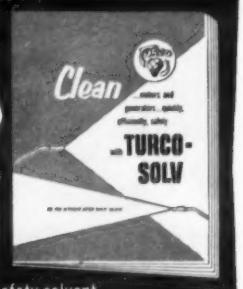
For more details circle NED-655 G7 on enclosed inquiry slip

spray clean

- ELECTRICAL EQUIPMENT
- PLANT EQUIPMENT

free folder

tells why . . . only TURCO-SOLV



the detergent-action safety solvent offers you this unchallenged combination of user benefits

- SAFE ON ALL EQUIPMENT
- NO RESIDUE
- NON-FLAMMABLE*
- PEAK CLEANING EFFICIENCY
- OPTIMUM EVAPORATION RATE
- LOWER TOXICITY

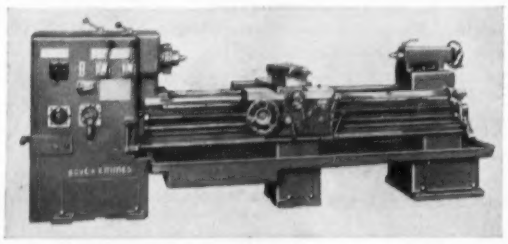
*UNDER NORMAL USE CONDITIONS

TURCO PRODUCTS, INC.
Chemical Processing Compounds
6135 So. Central Ave., Los Angeles 1, Calif.
Factories: Newark, Chicago, Houston, Los Angeles, London, Rotterdam, Sydney, Mexico City, Naha (Okinawa)
Manufactured in Canada by B. W. Deane & Co., Montreal
Offices in all Principal Cities

For more details circle NED-658 G7 on enclosed inquiry slip

18-SPEED LATHE
has 25-in. maximum swing and 63 thread and feed changes

Back gear shaft and gears of the series CB2-2516 lathe are located in front of the spindle so that the downward pressure of the gears neutralizes the effect



of the tool lift under heavy cuts. Lathe has hardened taper key drive or cam lock spindle nose, hardened and ground steel bed vees, power rapid traverse, longitudinal and crossfeed electrical stops, and spindle speeds up to 1500 rpm.

Maximum swing clearance over bed and carriage wings is 25 in. and maximum swing over cross slide is 16 in. Machine has 18 speeds in geometric progression from 30 to 1500 rpm in high range, and from 20 to 1000 rpm in low range. Recommended motors are 10 to 20 hp and 7½ to 15 hp for the two ranges.

Sixty-three thread and feed changes are provided for threads from 2 to 224 threads per inch. Various standard and special attachments are available. Made by **Boye & Emmes Machine Tool Co.**, 117 Caldwell Dr., Hartwell, Cincinnati 16, O.

For more details circle NED-656 G7 on enclosed inquiry slip

SPLIT-SECOND TIMING with the NO-FILAMENT-TUBE ELECTRONIC TIMER

Instant Timing — cold-cathode tube requires no warm-up.
Immediate Recycling — no recharge time needed for capacitor.
Flexible Arrangements — four models with many circuit features.
Short-time Intervals 1.5, 3, 6, 12 sec. standard; 0.2, 0.5, or 24 seconds on special order.

Model C

Easy Setting — short intervals can be spread over entire dial.
Eight-ampere Contacts — single-pole double-throw load.
Small Size — 3⅞" wide × 4⅜" high × 2" deep.
Low Cost — Model A ..... $29.00 list
Model C shown (momentary-contact start) ..... 32.00 list
Special features built-in on all models at nominal cost.

Write for complete information on Farmer Electronic Timers; and the CK Electronic Relay that will pick up impulses too short to operate a mechanical relay directly.

FARMER ELECTRIC
Products Company, Incorporated
2300 WASHINGTON ST. NEWTON LOWER FALLS, MASS.

For more details circle NED-653 G7 on enclosed inquiry slip

how to trap dust
that damages your machines and hurts company morale

Easy-to-move TORIT dust collectors trap dust at its source!

Priced from $190.00

Untrapped dust costs money: "secretly" forces precision machines out of line, limits production. Torit dust collectors are unitized for custom installation—save more money, usually more efficient than central (built-into-building) system. Torit unit operates only when machine or combination of machines it protects are on. Filtered air may be returned to room to save heat. Many models and sizes, all self-contained, easy to move. Write today to . . .

TORIT *manufacturing co.*
Dept. 201 311 Walnut Street, St. Paul 2, Minn.

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Amazing New Limit Switch
Operates Without Physical Contact

Write for PROXIMITY LIMIT SWITCH BULLETIN
Square D Company, 4041 N. Richards St., Milwaukee 12, Wis.

SQUARE D COMPANY

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Amazingly COOL HEAT VENTILATED REFLECTOR

NEW MODEL 55-VCX-701 FOSTORIA LOCALITE

FINEST OF ALL LOCAL LIGHTING UNITS

$9.31 EACH In Std. Pkg. of 4

MARVELOUS NEW SEEING TOOL

Frictional arm and collar disc joints give flexibility of a thousand positions to direct light exactly as wanted. Rugged construction with heavy duty industrial socket, Levolier switch and universal base.

INNER SHIELD ACCESSORY for extreme coolness when using 100 WATT lamps.

WRITE for complete catalog of Localite Models for every industrial use.

THE FOSTORIA PRESSED STEEL CORPORATION, FOSTORIA, OHIO

Localites are available through wholesalers everywhere

LOCALITE fostoria for Light ON the Job

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Saw Large Holes thru sheet or plate

MARVEL High-Speed-Edge Hole Saws (with high-speed-steel cutting edge integrally welded to tough alloy steel body) provide fast, economical means of sawing out holes from 9/16" to 6" diameter through steel up to 1⅛" thickness. Extra cutting quality and high-speed-steel, self-aligning, double drive pin arbors give strength for use on drill presses, lathes and portable tools, greatly increase the hole size capacity of small tools. Last longer and cut faster with safety.

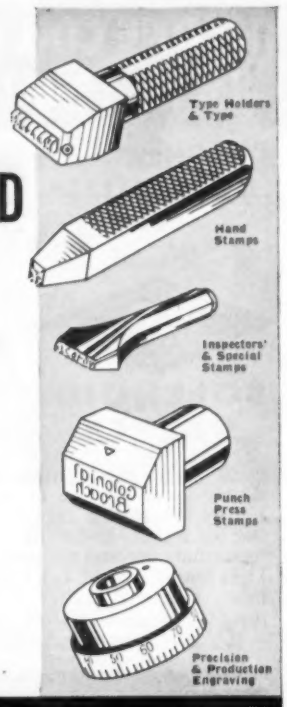
Write for Hole Saw Catalog Sheets.

MARVEL Metal Cutting SAWS
Better Machines—Better Blades

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

For more details circle NED-660 G7 on enclosed inquiry slip

You'll "mark" savings with NEW METHOD MARKING DEVICES...



- More impressions
- Longer marking life
- Clearer impressions
- Finest tool steel
- Quick delivery

"We solve marking problems." Write our Mr. C.D.K. Brown for catalog and advice.

NMSS SINCE 1931 NEW METHOD STEEL STAMPS INC.
147 JOS. CAMPAU • DETROIT 7, MICH.

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Cambridge

WOVEN WIRE BELTS
combine movement with processing to lower costs

Regardless of what you process . . . metal parts, food products, chemicals, plastics, ceramics or glass . . . a continuous belt-to-belt flow on woven wire conveyor belts combines movement with processing to eliminate batch handling and cut operating costs. EXAMPLE:

Continuous Drying

MOVING BELTS carry fibres through drying oven in steady, continuous operation.

OPEN MESH allows free circulation of heat or process atmospheres around all parts of product. In washing or chemical treating operations, open mesh permits quick drainage of process solutions, uniform treatment of material.

ALL METAL BELT easily withstands temperatures from sub-zero up to 2100° F.; rust-proof alloys can be used for operation in corrosive conditions.

WOVEN WIRE CONSTRUCTION provides extra strength, extra long life. There are no seams, lacers or fasteners to break or wear.

SPECIAL RAISED EDGES or surface attachments are available to hold even smallest parts in position on the belt during flat or inclined movement.

Cambridge Woven Wire Conveyor Belts are made in any size, mesh or weave, from any metal or alloy to do the job you want . . . hot or cold, wet or dry. Call your Cambridge Field Engineer to discuss how you can cut operating costs with woven wire conveyor belts. Look under "Belting, Mechanical" in the *Yellow Pages*. Or, write for FREE 130-PAGE REFERENCE MANUAL.

The Cambridge Wire Cloth Co.
WIRE CLOTH | WOVEN WIRE CONVEYOR BELTS | WIRE CLOTH FABRICATIONS
Department C, Cambridge 7, Maryland
OFFICES IN PRINCIPAL INDUSTRIAL CITIES

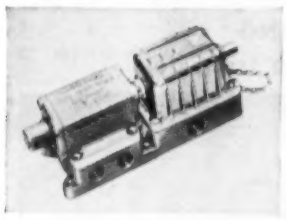
For more details circle NED-662 G7 on enclosed inquiry slip

COVER GOGGLES
fit over most prescription glasses

Functionally designed wide angle lens of model 440M all-purpose cover goggles fits over most prescription glasses, even those with higher than average temples. The soft vinyl frame form-fits any face, closing all gaps against eye hazards. Flanged nose bridge gives added protection around nose. Frame is offered in clear, green or opaque black vinyl. Shatterproof lens, easily replaced with special tools, is available in either methacrylate for heavy-impact protection or acetate for average protection. Former is offered in clear, yellow, blue and light, medium or dark green, while latter comes in clear or green. Regular, screen or fog-free Stac-Vent ventilation is optional. Made by **Watchemoket Optical Co.**, Dept. N31, 232 W. Exchange St., Providence 3, R. I.

For more details circle NED-663 G7 on enclosed inquiry slip

AIR VALVE
has independent body and solenoid



Body and solenoid of this air valve can be removed independently from their base without disturbing the other unit. Control exceeds all JIC requirements and features an integral conduit box and a solenoid with shock resisting mountings. Valve is offered in ⅜-in. single solenoid, double solenoid and three-way models. Made by **Mechanical Air Control, Inc.**, 10030-A Capital Ave., Oak Park, Detroit 37, Mich.

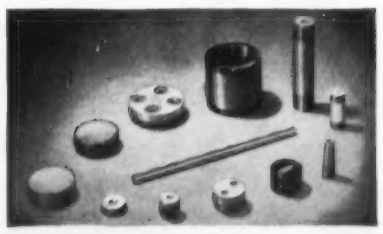
For more details circle NED-664 G7 on enclosed inquiry slip

SILICON COMPONENT RECTIFIERS
ratings up to 140 amp per cell

Ratings up to 140 amp per cell are available in high-power silicon component rectifiers used in direct current power supplies, electrolytic-electrochemical equipment, battery chargers, computers, radar and tube filament power supplies. Small silicon wafer is hermetically sealed in an enclosure of ceramic and welded stainless steel. Units are designed for air or liquid cooling and can be used in convection cooled applications at lower current ratings. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

For more details circle NED-665 G7 on enclosed inquiry slip

another first!
MOLCOTE *metallized ceramic coating*
for use with all types of hard solders!

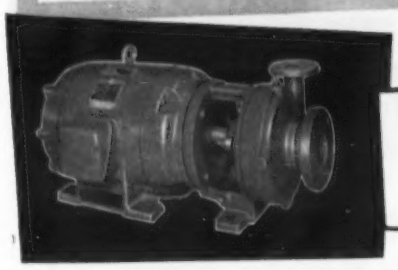


Here's a firmly bonded metal-to-ceramic coated surface to which a metal or metallized ceramic may be hard soldered *up to 2200° F!* Its versatility permits use in a wide latitude of high temperature assembly manipulation, and its extreme refractory qualities defy the attack of solders of the copper-silver, silver, and pure copper types. No expensive preliminary processing is required. MOLCOTE's solder bonds are exceptionally strong to the point of fracture! Like to know more? Bulletin 1155 contains all the facts. Write for a copy!

frenchtown PORCELAIN COMPANY
97 Muirhead Avenue • Trenton 9, New Jersey
CALIFORNIA REPRESENTATIVE: Edwin E. Starr, 4101 Rhodes Ave., North Hollywood, Cal. STanley 7-5879

For more details circle NED-666 G7 on enclosed inquiry slip

Save space · Save cost
with this advanced new line of quality-built, close coupled
GENERAL SERVICE PUMPS



Foot Mounted Motor Frame shown. Also available with Round Motor Frame.

DEAN BROTHERS TYPE "GSC" STANDARD CLOSE COUPLED CENTRIFUGAL PUMPS

- 7 SIZES—up to 600 gal. per min. • TOTAL DYNAMIC HEAD—up to 275 ft.
- TEMPERATURE OF LIQUID—from minus 40°F to plus 250°F.
- Available from stock in ALL IRON, BRONZE FITTED or ALL BRONZE Construction.
- Enclosed Francis Vane Impeller for high efficiency and low NPSH requirements.
- Packing and Mechanical Seal are interchangeable without modification of pump.
- Removable back head construction permits removal of impeller without disturbing suction or discharge piping.

SEND FOR DESCRIPTIVE CIRCULAR NO. 191 A

DEAN BROTHERS PUMPS INC.
EST. 1869
323 West 10th St., Indianapolis 7, Ind.

For more details circle NED-667 G7 on enclosed inquiry slip

for *Every* Application

GIVE YOU GREATER SAVINGS

DARNELL CASTERS & WHEELS

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get the FACTS!
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36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

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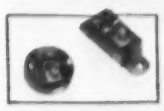
Maximum Temperature Control In A Minimum Of Space

These miniaturized temperature controls utilize the famous Fenwal THERMOSWITCH® principle. The outer shell is the activating element. That means short heat transfer path, built-in temperature anticipation, control stability and inherent thermostat sensitivity of less than 1°F. That's why they're ideal for such applications as aircraft, guided missiles, antennas, electronic equipment, radar, motors, computers, wave guides, crystal ovens, etc.

MIDGET. Shell is ¼" O.D. and is highly sensitive to changes over entire area. Single wire and two wire types; wide range from −50°F to 500°F; units which either make or break on temperature rise for control of gases, solids, liquids.



MINIATURE. Control within 2°F to 6°F is typical, even under 5G acceleration. Fully adjustable ranges of −20°F to 200°F or −20°F to 275°F. Hermetically sealed units −20°F to 200°F.

Get new, helpful facts on small-space temperature control and detection. Write for free bulletin MC-124, **Fenwal Incorporated, 87 Pleasant Street, Ashland, Massachusetts.**

Fenwal Controls Temperature . . . Precisely

For more details circle NED-669 G7 on enclosed inquiry slip

When you see THIS . . ✓

WHEREVER drawings specify microinch roughness, the Profilometer® is the practical means for checking the parts against those specifications. *Here's why:*

1 The Profilometer *measures* the roughness of practically *all* machined and finished surfaces, *directly in microinches.*

2 It is *accurate and dependable*—even below 3 microinches.

3 It's an easy-to-use SHOP TOOL — built for hard service — reasonably priced — and *thoroughly proven* in *thousands* of production and inspection departments since 1936.

FREE BULLETIN LT14 gives details — shows many typical applications. WRITE TODAY!

Profilometer is a registered trade-mark.

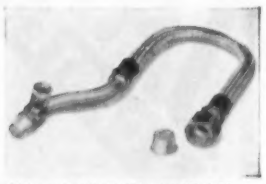
MICROMETRICAL MANUFACTURING COMPANY
333 S. Main St. Ann Arbor, Michigan

For more details circle NED-671 G7 on enclosed inquiry slip

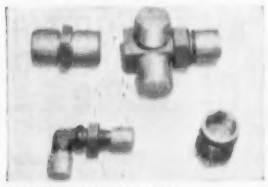
a free CaPlug assortment like this

will give you dozens of ideas for protecting products like these

JUST PUSH THEM IN . . . OR PUSH THEM ON
Tapered (non-threaded) CaPlugs can be used as caps or plugs, inside or outside of threaded or plain fittings. Made of tough, flexible Polyethylene, CaPlugs are unaffected by most chemicals, acids and solvents . . . will not collapse, chip, break or shred.



"KID GLOVE" PROTECTION WITH A DUAL PURPOSE
Here's how Resistoflex Corp. uses CaPlugs "to protect critical threads and machined surfaces and to keep the interiors of hose assemblies clean." Says Resistoflex, "CaPlugs prove most effective for both functions as well as being particularly easy to install."



COUNTLESS USES BY THOUSANDS OF USERS
Bell Aircraft Corp. applies both threaded and non-threaded CaPlugs to a wide variety of parts (such as these) in the manufacture of guided missiles, electronic components, rocket engines and servomechanisms. With numerous styles stocked in over 500 sizes, CaPlugs are readily available to answer practically every closure need.

MAKES A PRODUCT LOOK ITS "SUNDAY BEST"
On this Alemite Accumatic Valve, colorful red CaPlugs add snappy eye appeal and indicate care of manufacture. Says Stewart-Warner Corp., "CaPlugs help impress the customer with the steps that have been taken to protect the equipment and convince him of the continuing need for protecting lubricants against contamination."

MAIL THIS COUPON FOR FREE SAMPLES

CAPLUGS DIVISION
PROTECTIVE CLOSURES CO., INC.
2209 Elmwood Ave., Buffalo 23, N. Y.

RUSH free assortment of CaPlugs, literature and prices to us.

NAME _____ TITLE _____
FIRM _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

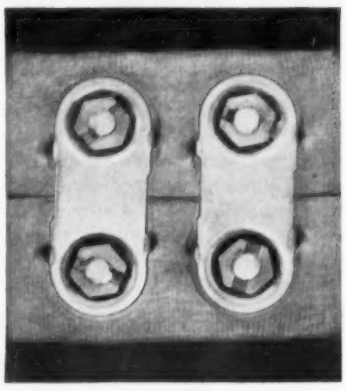
For more details circle NED-672 G7 on enclosed inquiry slip

CHIP BREAKER GRINDERS
electrolytic type for carbide tools

Combination of diamond wheel and electrolytic grinding in the model CBE chip breaker grinder results in a considerable savings in diamond consumption over diamond grinding alone. Two models using 6 and 10-in. diameter wheels accommodate tools up to 2½ in. wide in any - angle vises, mounted on cross slides with handwheel adjustment calibrated to 0.001-in. Heavy, dynamically balanced spindle is mounted on preloaded duplex ball bearings and is insulated from the machine. Table stroke is up to 8 in. Fog is removed by a built-in MistKolector which returns coolant to pump and tank unit in the base. Made by **Hammond Machinery Builders, Inc.**, 1623 Douglas Ave., Kalamazoo, Mich.

For more details circle NED-673 G7 on enclosed inquiry slip

BELT SPLICE COVERING
seals out moisture from belt



Conveyor belt splices made with recessed Flexco fasteners can be covered or protected by use of Rema self-vulcanizing rubber repair material. One of two methods of use calls for recessing the fasteners in the face for use of plows and scrapers. Both top and bottom of belt and rips can be covered in this manner. Second method, illustrated, seals ends with Rema Red Filler sheeting before applying fasteners. Material seals out moisture; minimizes rot, mildew and deterioration; and prevents sifting and seepage of fines. Made by **Flexible Steel Lacing Co.**, 4607 Lexington St., Chicago 44, Ill.

For more details circle NED-674 G7 on enclosed inquiry slip

Electronic Components

Richards Electrocraft, Inc.—Descriptive information is given on such electronic components as plugs, jacks, connectors, adapters and pushbutton switches in both standard and miniature sizes in 8-page bulletin 357. Parts are illustrated, and drawings show construction details. Sizes and types available are tabulated.

For more details circle NED-675 G7 on enclosed inquiry slip

TAKE THE HEAT OFF

. . . with SILICONE LUBRICANTS

High temperature lubrication got you on the "hot spot"? Cheer up. There is an economical solution to your problem — Dow Corning SILICONE oils and greases. These heat, cold and oxidation resistant lubricants stay put and provide long-time lubrication at operating temperatures far above and below the limits of even the best organic oils and greases. Reduce relubrication and maintenance costs with Dow Corning SILICONE lubricants.

FREE! JUST PUBLISHED—8-page brochure on Silicone Oils and Greases, their properties and uses. Write today for your Free Copy.

first in silicones

DOW CORNING SILICONES

DOW CORNING CORPORATION
Midland, Michigan, Dept. 5419a.

For more details circle NED-676 G7 on enclosed inquiry slip

This ONE COIL is all you need for most jobs!

NEW MULTI-VOLTAGE COIL fits all

J-E

SOLENOID VALVES

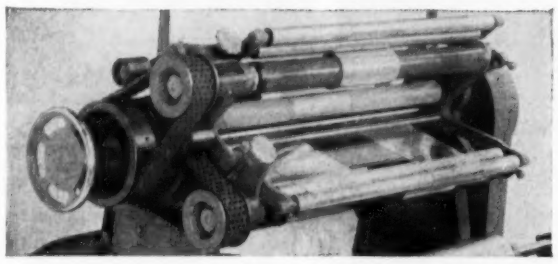
NOW—from Jackes-Evans—you can get *one* coil assembly to do the job of many . . . *one* coil that is equally suitable for 115/25, 115/50, 115/60, 208/50, 208/60, 230/50 or 230/60 circuits . . . *one* coil that successfully operates to control the flow of Water, Air, Light Oils, Freon 12 and 22 (liquid, hot gas, suction), Brine, Industrial Gas, 5 lb. Steam, etc . . . *one coil that fits any standard "J-E" Solenoid Valve from 7/64" to 1½" port size and up to 225°F.*

For further information on this outstanding development, write:

Controls Division **JACKES-EVANS MFG. CO.**
4427 Geraldine Ave. • St. Louis 15, Mo.

For more details circle NED-677 G7 on enclosed inquiry slip

For light gauge, stretchy films . . ONLY the BECK SLITTER has this feature !



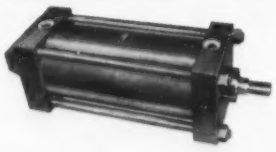
Counter-balanced Lay-on Rolls lightly smooth the film onto the Rewinds, for straight, wrinkle and stretch free rolls — each has individual web tension to control core slippage. Write for full information today on the Beck Razor Blade Slitter.

CHARLES BECK MACHINE CORPORATION
30 CHURCH ROAD BECK KING OF PRUSSIA, PA.

Automatic Roll Sheet Cutter • Razor Blade Slitter and Rewinder • Shear Cut Slitter • Sheeter-Printer for sample books • Engraved Roll Printer

For more details circle NED-678 G7 on enclosed inquiry slip

Modernair HEAVY DUTY CYLINDERS
for Air or Hydraulic Service



Developed to meet the need for a rugged, reliable cylinder, for heavy mill-type service, MODERNAIR's new Heavy Duty Series are made in two types:

HA • for air service to 200 psi. **HH** • for hydraulic service to 1,000 psi.

Both types are available in 3¼", 4", 5", 6" bore sizes, optional stroke length.

Features include:

- ★ Rolled steel heads
- ★ Extra-heavy tie rods
- ★ Heat-treated, chrome plated piston rods
- ★ Self-adjusting "Uneepac" rod seals
- ★ Needle valve cushion adjustment

Write for catalog, prices today—or phone your local MODERNAIR distributor (listed on your phone book Yellow Pages).

Modernair CORPORATION
Dept. F7, 400 PREDA STREET, SAN LEANDRO, CALIF.
Member National Fluid Power Association 31

For more details circle NED-679 G7 on enclosed inquiry slip

Clean, uniform, exact heat to match the size and shape of your production equipment

CHROMALOX Electric Strip Heaters

Quickly and easily bolt or clamp Chromalox Electric Strip Heaters to your platens, dies, kettles, tanks, pipes, ovens, air ducts, for the many advantages obtained only with electric heat.

Lengths 4" to 96" Widths ¾" to 2½"
Cross-section curving or lengthwise bending.
Ring Diameters 2½" to 11"
115, 208, 230, 480 Volts 35 to 5,000 Watts
Sheath Materials: rust resisting iron, high temperature chrome steel, Monel
Choice of convenient terminal placements.

FREE BULLETIN—Call your Chromalox Representative . . . or write today for Bulletin F1566.

Edwin L. Wiegand Company
7509 Thomas Boulevard, Pittsburgh 8, Pa. C-8108
See other ad on page 4

For more details circle NED-680 G7 on enclosed inquiry slip

Letters Perfect

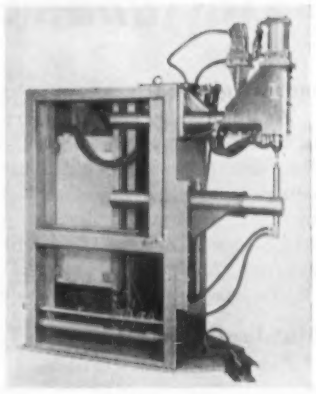
A "letter perfect" soldering job is yours when you specify KESTER FLUX-CORE SOLDER . . . the "letters perfect" for any type of soldering . . . the assembly line or service bench.

WRITE TODAY for the KESTER 78 page textbook "Solder . . . Its Fundamentals and Usage." Free!

KESTER SOLDER COMPANY 4249 Wrightwood Ave., Chicago 39, Ill.
Newark 5, N. J. • Brantford, Canada

For more details circle NED-681 G7 on enclosed inquiry slip

SPOT & PROJECTION WELDER
left or right of center arms extend to form 30-in. throat

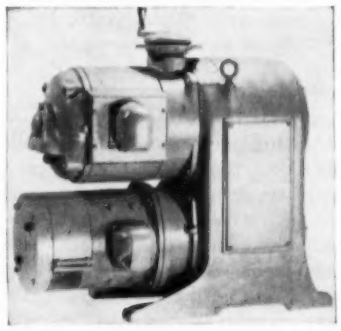


Arms can be installed to left or right of center as specified on this roller head, press type spot and projection welder. Thus, it is possible to weld large irregular shaped pieces that fit around the corner of its narrow chassis. Machine with right hand arms can be used next to machine with left hand arms, bringing points to within 9½ in. for sequence welding operations.

Arms can be extended to give up to 30-in. throat depth. Vertical adjustment of lower arm up to 15 in. is possible. Demountable upper arm can be replaced by multiple welding guns or projection welding platens. Water cooled open or closed circuit welders are available in two sizes: 30, 50 and 75 kva with 1000 psi at 80 psi air line pressure; and 75, 100 and 150 kva with 2300 psi at 80-psi line pressure. Made by **Allied Welder Corp.**, 8702 Brandt St., Dearborn, Mich.

For more details circle NED-683 G7 on enclosed inquiry slip

VARIABLE SPEED UNIT
converts fixed speed ac motors for speed variations up to 5:1

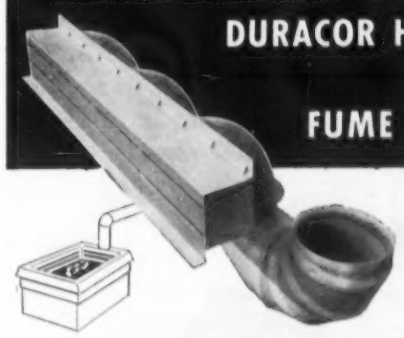


Any standard NEMA three-phase alternating current fixed speed induction motor can be converted into a variable speed drive by connecting its leads to a Varidyne power unit. Motor need not be removed from its present installation. Speeds are changed at the power unit by a handwheel, or remotely by mechanical or electrical remote controls. Units are available to handle a total connected load of from 1 to 50 hp, with speed variations up to 5:1.

More than one motor of the same rating can be connected to the unit for simultaneous and equal speed changes. Power units are available which permit soft starts, inching and jogging of the drive motor. Addition of a Varitrol pneumatic control permits automatic motor speed changes in response to such variables as pressure, temperature, position, liquid level and humidity. Made by **U. S. Electrical Motors Inc.**, Dept. NED, 200 E. Slauson Ave., Los Angeles 54, Calif.

For more details circle NED-684 G7 on enclosed inquiry slip

CORROSION-PROOF
DURACOR HOODS AND FUME DUCTS



DURABLE glass fibre reinforced plastic in a complete range of shapes and sizes

Newly developed for handling fumes from highly corrosive chemicals in operations such as plating and pickling, DURACOR hoods and ducts provide permanent resistance to corrosion.

They are fabricated from specially compounded thermo-setting plastics which are combined with glass or other synthetic fibers. Hoods and ducts can be produced in almost any desired shape. They are light in weight, durable and strong (up to 30,000 psi flexural strength). Write today for complete information.

DURACOR CEILCOTE

DURACOR is another development by CEILCOTE!

THE CEILCOTE COMPANY, INC.
7523-CC 4838 Ridge Rd. Cleveland 9, Ohio

For more details circle NED-685 G7 on enclosed inquiry slip

WHAT'S NEW IN MOTOR CONTROL?

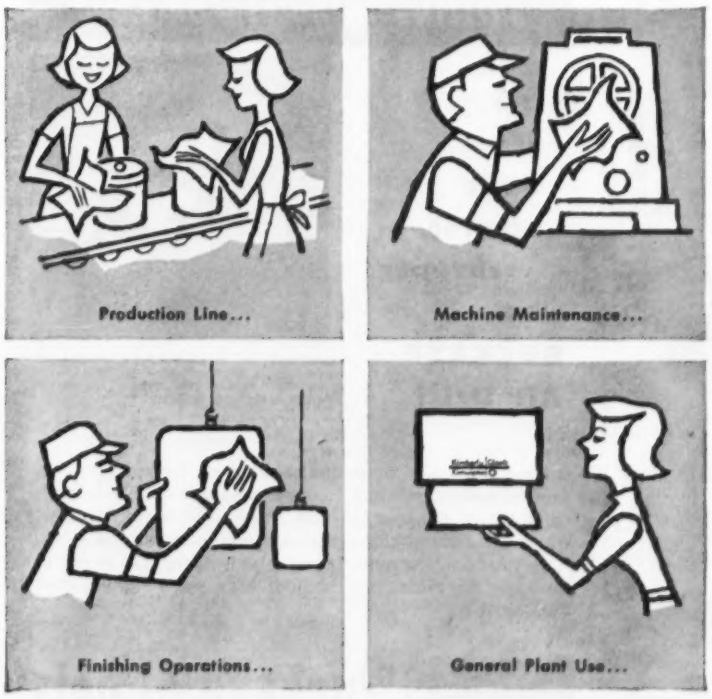
HIGH-QUALITY LOW-COST MULTI-USE SAFETY SWITCH

Electricians everywhere say nothing equals this new Cutler-Hammer 4151 Midget Safety Switch. The perfect switch for home and commercial motor circuit protection, oil burners, fans, blowers, pumps, home workshop tools, automatic washers, dryers, etc. Installs easier, works better, lasts longer; yet it sells in the price range of the cheapest switches made. Much easier to wire, all connections are at front, no buried terminals. Easily operated toggle switch has solid silver contacts. Unit base is non-breakable, molded of a special high-strength phenolic. Uses plug type fuses. Rated at 30 Amp., AC only. Ask today for C-H 4151. Stocked by Authorized Cutler-Hammer Distributors and the better electrical supply stores everywhere. CUTLER-HAMMER, Inc., 1377 St. Paul Ave., Milwaukee 1, Wis.

CUTLER-HAMMER MOTOR CONTROL C-H

GET IT FIRST IN CUTLER-HAMMER

For more details circle NED-686 G7 on enclosed inquiry slip



Do more wiping jobs faster, at less cost . . . use

Kimwipes
INDUSTRIAL WIPERS

KIMWIPES Industrial Wipers eliminate laundry charges, rag collecting, counting and material losses. Kimwipes wipe clean faster, dry or soaked with solvents. You can reuse a Kimwipe and when the job calls for a clean wiper, reach for a clean Kimwipe . . . dispensed pop-up fashion like Kleenex tissues or in handy metal wall dispensers.

Kimberly Clark INDUSTRIAL WIPERS Kimwipes

Kimwipes and Kleenex are trademarks of Kimberly-Clark Corp.

Kimwipes Industrial Wipers are made by the makers of Kleenex tissues • Kimberly-Clark Corporation, Neenah, Wisconsin

For more details circle NED-682 G7 on enclosed inquiry slip

Does Your Shop Bend?
These things?

Etc.

Wallace has been building quality benders since 1896.

Use our experience

Write for literature - but - tell us about your work.

Over 100 types - wide range of sizes

Wallace Supplies Mfg. Co.
1312 Wolfram Street Chicago 13, Illinois

For more details circle NED-687 G7 on enclosed inquiry slip

RAYMOND HYDRAULIC EQUIPMENT

PORTABLE ELEVATING TABLE

Positions work, supports long pieces, simplifies die handling. Telescopic and non-telescopic models. Capacity: 2,000 lbs.

RAYMOND

LIGHTWEIGHT PALLET TRUCK

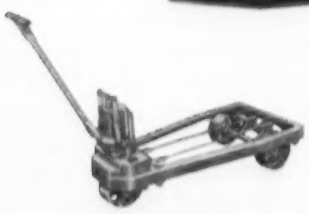
Rugged, maneuverable, 270° turning radius. Separate lift and lower pedals. Capacity: 2,000 lbs. 4,000 and 6,000 lb. cap. trucks also available.

RAYMOND

SHEET FEEDING TABLE

Raises sheets, strips to right working level. Increases production, makes work safer, easier. Capacities: 2,000 to 30,000 lbs.

RAYMOND



SKID TRUCK

Sturdiest skid truck made! 360° turning radius for close-quarter steering, plus finger-tip lowering. 3 cap.: 2,500; 4,000 or 6,000 lbs.

MAIL THIS COUPON

The RAYMOND CORPORATION
4130 Madison St., Greene, N.Y.

Please send Bulletins on RAYMOND Hydraulic Equipment checked below:

☐ 4,000 and 6,000 Lb. Cap. Pallet Truck
☐ Portable Elevating Table ☐ Sheet Feeding Table
☐ 2,000 Lb. Cap. Pallet Truck ☐ Skid Truck

NAME TITLE
COMPANY
STREET
CITY STATE

For more details circle NED-688 G7 on enclosed inquiry slip

New Literature and Catalogs

Industrial Gearing

Westinghouse Electric Corp.—"Industrial Gearing" is title of 12-page booklet B-7012 which outlines design facilities and manufacturing capacity of company's gearing division. Special machinery and heat-treating equipment are shown along with a heat-treat story emphasizing the BP taper hardening process. A complete machinery listing is included.

For more details circle NED-689 G7 on enclosed inquiry slip

Standard & Telemetering Test Instruments

Panoramic Radio Products, Inc.—All of company's standard instruments, including telemetering test instruments, plus some new equipment are listed in 8-page "Catalog Digest." Waveform analyzers and equipment for RF, VHR and UHF spectrum analysis are covered. Telemetering test instruments are designed to provide a quick, reliable method of checking airborne packages and ground station equipment in FM/FM telemetering systems.

For more details circle NED-690 G7 on enclosed inquiry slip

V-Drives

Fractional to 10-hp V-drives, drive parts and accessories are described and illustrated in 46-page catalog F-10. Descriptions and size data are presented for bushed and fixed bore types of cast iron and pressed steel V-pulleys, V-belts, refrigeration fans and fan pulleys, interchangeable bushings and other products. Request on company letterhead from Maurey Mfg. Corp., 2915 S. Wabash Ave., Chicago 16, Ill.

For more details circle NED-691 G7 on enclosed inquiry slip

Truck & Locomotive Batteries

Electric Storage Battery Co., Exide Industrial Div.—Characteristics curves showing performance at various discharge rates are included in 12-page illustrated catalog 5161 on industrial truck and mine locomotive batteries. Permanized negative plates, shock resistant rubber jars, polyethylene tube sealers and other features are described. Also included are service records.

For more details circle NED-692 G7 on enclosed inquiry slip

Resistors & Controls

Clarostat Mfg. Co.—Revised catalog No. 57 describes a wide choice of resistors and controls to meet every fixed and adjustable resistance requirement. Composition-element and wire-wound potentiometers; power rheostats, including enclosed and aircraft types; sound system attenuators; screwdriver adjusted controls; fixed and adjustable power resistors; fuse-type resistors; ballasts and line voltage regulators; carbon-deposited resistors; and the power resistor decade box are covered.

For more details circle NED-693 G7 on enclosed inquiry slip

BY POPULAR DEMAND!

..... A NEW JUMBO SIZE SIPCO DUNKING STATION

Specially designed for use in plants where SIPCO DUNKING STATIONS receive more than average use. Goes shift after shift without attention, greatly reducing cleanup time. Heavy duty cast aluminum canister. Guaranteed 3 years against breakage. Interchangeable with standard size canisters on any model SIPCO DUNKING STATION.

PRESENT SIPCO USERS!
Order NEW JUMBO size canisters separately. They are interchangeable with your present standard size units.

UNIT No. 1J—Heavy duty cast aluminum JUMBO canister, attractive eye-catching metal sign, upright and heavy weighted base. 42" high, wt. 26 lbs.

UNIT No. 2J—Same as above except without upright and base. For mounting on walls, posts, columns or machines. Wt. 6 lbs.

UNIT No. 3J—(not illustrated)—Canister alone with mounting bracket.

WRITE FOR ILLUSTRATED FOLDERS

STANDARD INDUSTRIAL PRODUCTS CO.
DEPT. D • 920 N. GARFIELD AVE. • PEORIA, ILLINOIS

For more details circle NED-694 G7 on enclosed inquiry slip

Does Your Shop Bend? Cut?
These things

Etc.

For just $2.50 you can have the new 1956 edition of
A Manual Of Processes for The Cold Bending Of Metals and Abrasive Cut-Machining Of Metals.

Whole Book -
$2.50 cash or we invoice $2.75
166 pages - 120 illustrations-graphs

Bending Section Only -
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$1.00 cash or we invoice $1.10
68 pages - 52 illustrations-graphs

Order today from your bookseller or by mail from

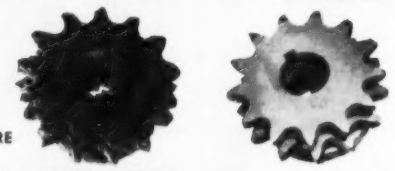
Wallace Supplies Mfg. Co.
1312 Wolfram Street Chicago 13, Illinois

For more details circle NED-695 G7 on enclosed inquiry slip

BROOKS NEW COLD SOLVENT CLEANER

Formula 780

SAFE • FAST • ECONOMICAL



BEFORE AFTER

FORMULA 780 is effective for use in many applications, both maintenance and production. Ideal for cleaning motors, electrical equipment, tools, machinery, gears, bearings and other maintenance parts.

SAFE TO USE . . . . High flash point minimizes fire risk
Low vapor toxicity and vapor pressure
WORKS FASTER . . . Dries quickly when used on any metal
Leaves clean, film free surface
EASY TO USE . . . . May be used to wipe, dip or spray
ECONOMICAL . . . . Needs no special safety equipment
High solvency power . . . less needed

ASK FOR PRODUCT DATA SHEET No. 013

BROOKS Chemicals, Incorporated
PLANTS
3304 East 87th Street CLEVELAND 27, OHIO
461 Cumberland Avenue HAMILTON, ONTARIO
OFFICES IN PRINCIPAL INDUSTRIAL CITIES
SINCE 1876

For more details circle NED-696 G7 on enclosed inquiry slip

DRILLING 10 HOLES—OR 1,000

faster, safer, easier, better, cheaper with a BUCKEYE Air Drill

Buckeye "A" Series drill, with offset handle, being used on an aluminum drilling operation. Clips hold panels in position after holes are drilled.

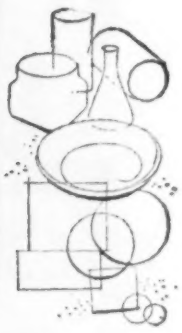
Drilling ten holes or a thousand holes an hour . . . in metals, woods, plastics . . . you can do it more economically with a Buckeye air drill. The tool operator concentrates on accuracy, the Buckeye tool does all the work.

If you don't already know about compact, powerful Buckeye air drills, you should. May we send you our Catalog A-10?

In Air Tools, Your Best Buy Is Buckeye

Buckeye Tools CORPORATION
DIVISION 34 • DAYTON 1, OHIO

For more details circle NED-697 G7 on enclosed inquiry slip



Extreme thermal shock has little effect on VYCOR brand glasses.

Can this glass answer any problem of yours?

Heat? VYCOR® brand glasses withstand temperatures as high as 1300° C. (in intermittent service).

Ultraviolet transmission? VYCOR brand glasses are available for ultraviolet transmittance at 365, 254, or 185 millimicrons.

Infrared transmission? VYCOR brand glasses will transmit infrared up to 3.5 microns—with or without transmission of visible light.

VYCOR brand glasses are resistant to most chemicals, have high electrical resistivity and low dielectric loss.

WRITE FOR BULLETIN B-91. Contains charts, tables and complete information about all 7 VYCOR brand glasses.

CORNING GLASS WORKS
56-7 Crystal Street, Corning, N.Y.
Corning means research in Glass

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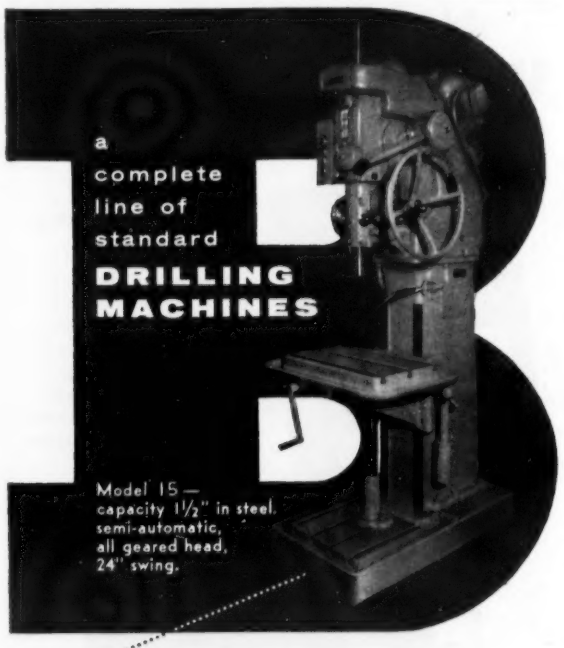


BARNESDRIL

advanced design features greater productivity, reduced costs

- *Single or Multiple Spindles*
- *Capacity in Steel from ½" to 2½"*

Barnesdril Standard Drilling Machines are available in a complete line of models and capacities ranging from ½" to 2½" capacity in steel.

Advanced features provide maximum work flexibility for high productivity and low cost per piece. Among these features on various models are:

- All-Geared Heads
- Multiple Speed Changes through Back Gears Up to 1415 RPM
- Sliding Heads
- Electric Automatic Reverse for Tapping
- Push Button Control of Start, Stop and Feed
- Depth Control with Automatic Feed Trip-Out
- Hydraulic Feed
- Ample Swing and Spindle Strokes
- Multiple Spindle Heads
- Screw-Raising Tables
- Hydraulic In-and-Out Tables
- Easy Service Accessibility
- JIC Standards

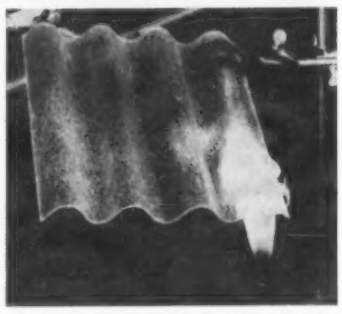
See your Barnesdril Representative or write for details.

BARNES DRILL CO.
75 year
866 CHESTNUT STREET • ROCKFORD, ILLINOIS
DETROIT OFFICE: 3419 South Telegraph Road

For more details circle NED-699 G7 on enclosed inquiry slip

New Processes and Materials

GLASS FIBER PANEL
has fire-retardant property



All the advantages of conventional Corrulux glass fiber panels, plus a fire-retardant quality are embodied in PyroPanl glass fiber panels. Tests show that panels will burn under a blow torch flame, but extinguish themselves when source of flame is removed. They have high strength, are shatterproof and provide excellent light transmission. Panel is available in industrial colors, flat sheets and many corrugations from **L-O-F Glass Fibers Co.**, Corrulux Div., Dept. GC-11, Box 20026, Houston 25, Tex.

For more details circle NED-700 G7 on enclosed inquiry slip

PVC PLASTISOL COATING
protects metal structures and parts

Metal parts and structures that cannot be dip-coated can be protected from chemical corrosion by spraying them with polyvinyl chloride plastisol Quel-Spray. Material is a true plastisol, requires no thinner, can be left in the gun over night and loses no thickness from wet to dry film when cured at about 350° F. Developed by **Quelcor, Inc.**, Front & Broomall Sts., Chester, Pa.

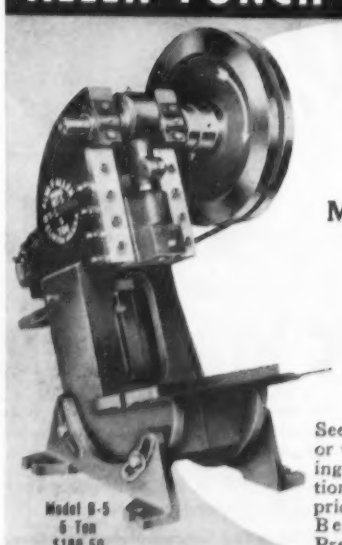
For more details circle NED-701 G7 on enclosed inquiry slip

HIGH TEMPERATURE LUBRICANT
has synthetic colloidal graphite

Synthetic colloidal graphite, homogenized and in partial suspension in synthetic oil, comprises Glo formula 6-1 high temperature lubricant. Uses include chains, rollers and bearings of conveyor lines subject to high heats, annealing furnaces, industrial ovens and kilns and in circulating fans subject to heat. Specifications include temperature resistance of 5000° F, open cup flash at 275° F and open cup fire at 290° F. Viscosity is 245 SSU at 100° F, 57 SSU at 210° F. Developed by **Rand Armor Inc.**, Glo Div., Dept. NED, 21949 S. Telegraph Rd., Trenton, Mich.

For more details circle NED-702 G7 on enclosed inquiry slip

Heavy Duty Bench Type ALLEN PUNCH PRESSES



Model B-5
5 Ton
$189.50
less motor—fob

Powerful
Dependable
Economical
Fully Guaranteed
Moderate in Price
164 Different Model Combinations 1 to 5 Ton Capacities

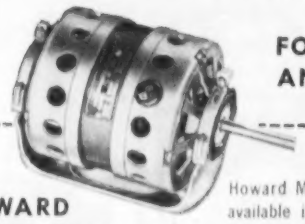
See your Supply Dealer or write for Catalog giving complete information, specifications and prices on our line of Bench Type Punch Presses.

Thousands in use by Leading Manufacturing Companies

ALVA ALLEN INDUSTRIES
Dept. NED, Clinton, Missouri

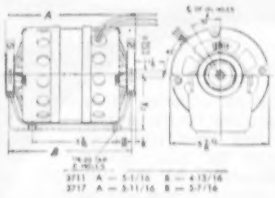
For more details circle NED-703 G7 on enclosed inquiry slip

EXCEPTIONALLY POWERFUL



FOR ITS SIZE AND WEIGHT

HOWARD MODEL 3700 INDUCTION MOTOR
for 1/25 to 1/8 h.p.



Howard Model 3700 motors are available in Hysteresis, Synchronous and Normal Induction motor types in 2 pole versions, both single phase and polyphase.

As a Normal Induction motor, Model 3700 is used for laboratory equipment, vending machine and general service requiring h.p. ratings up to ¼ h.p.

As a Hysteresis Motor, 3700 series are used widely in recording and facsimile equipment. These motors are the ultimate in quiet operation. Resilient mounting base is normally supplied. For complete performance data, write today to Howard.

HOWARD MOTORS

HOWARD INDUSTRIES, INC., 1740 State St., Racine, Wis.
DIVISIONS: ELECTRIC MOTOR CORP. • CYCLOHM MOTOR CORP. • RACINE ELECTRIC PRODUCTS

For more details circle NED-704 G7 on enclosed inquiry slip

GATES-DRIVEWAYS

Need Anchor Guard Rail

Because it provides sturdy, *buffer* protection wherever you need it, Anchor Guard Rail is an ideal *first line of defense*. It prevents careless traffic damage around transformer enclosures, building corners, gates, driveways, pipe installations and valuable fencing. Anchor Guard Rail combines extreme strength, compact design, beauty and neatness with minimum upkeep.

Anchor Guard Rail is erected by Anchor's own men—backed by 65 years of experience. Call the Anchor office in your area for a free estimate. Or write: ANCHOR FENCE, 7007 Eastern Avenue, Baltimore 24, Maryland.

Anchor Fence®
Division of ANCHOR POST PRODUCTS, Inc.
Plants in: Baltimore, Md.; Houston, Texas; and Whittier, California
Sold direct from factory branches and warehouses in all principal cities

For more details circle NED-705 G7 on enclosed inquiry slip

Cut Maintenance $600 yearly per unit with WORLD Hand Dryers

Best By Test!
Factory Guaranteed!

THOUGHTFUL BUYERS USE WORLD!
Marshall Field & Co.
Northwestern University
Chrysler Corp.
Union Pacific Railroad
Libby-Owens-Ford
Frick Building
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U. S. Navy
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Each high speed WORLD Hand Dryer can save up to $600 per year on paper and maintenance . . . dry hands fast as towels . . . keep washroom clean and sanitary.

Prove it to yourself under our FREE trial offer! Full details on request.

MAIL THIS COUPON NOW!

WORLD DRYER CORPORATION
616-22 W. Adams St., Chicago 6, Ill.

Gentlemen: Without obligation send me copies of letters from users, also folder of facts including cost-saving figures and full details on your FREE-TRIAL offer.

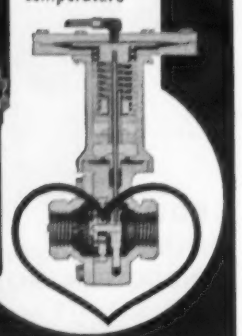
My name _____
Firm name _____
Street _____
City _____ State _____

For more details circle NED-706 G7 on enclosed inquiry slip

OPW JORDAN
self-operating
temperature control valve

- GUARANTEED DEAD END SHUT-OFF
- MORE ACCURATE REGULATION
- ELIMINATES NEED FOR PRESSURE REDUCING VALVE ON HIGH INLET PRESSURES

the different and improved way to control temperature



with the sliding gate and plate

the heart of the OPW-JORDAN Valve

No. 180

The unique basic design and exclusive features of this valve are responsible for its outstanding performance and long dependable service life. Durably constructed for hard, constant use, the compact, space saving, No. 180 offers the full advantage of accurate control with desired sensitivity of response.

For more facts, write for Bulletin J-180

JORDAN CORPORATION

INDUSTRIAL SALES DIVISION OF OPW CORPORATION
6013 Wiehe Road
Cincinnati 13, Ohio
ELmhurst 1-1352

For more details circle NED-707 G7 on enclosed inquiry slip

PROPELLAIR®
it moves the air...

...whisper-quiet performance

Where noise adds to costly confusion you are wise to install whisper-quiet Propellair Type "QD" fans. The efficient air foil design of the rigid, precision balanced, cast aluminum propeller eliminates vibration noise and the sounding board effect of ordinary thin sheet metal blades. The special blade pitch delivers high volumes of air at quieter, lower speeds. Noise is further reduced by Propellair's steel venturi entrance ring. Powered by dependable, totally-enclosed Robbins & Myers motors, they are available in sizes from 12" to 36". Air delivery capacities from 1235 to 12000 CFM.

WRITE FOR BULLETIN NO. 695-N

R&M PROPELLAIR®
DIV. OF ROBBINS AND MYERS, INC.
SPRINGFIELD, OHIO
Certified Ratings PMA

MOVING AIR IS OUR BUSINESS

For more details circle NED-708 G7 on enclosed inquiry slip

New Literature and Catalogs

Packaged Machine Drives

Allis-Chalmers Mfg. Co.—Ratings from 5 to 200 hp are available in the Ultra-Speed packaged drives for controlling kilns, pumps, extruding machines, machine tools and other equipment. Subject of bulletin 51B8166A, the direct current conversion device consists of motor-generator set and related control equipment.

For more details circle NED-709 G7 on enclosed inquiry slip

Drill Selection Catalog

Besly-Welles Corp.—Details provided in new Drill Catalog provide quick identification for proper drill selection. Information covers line of drills, end mills, reamers, tool bits and related tools in high speed steel, carbide tipped and solid carbide types. Two sections are devoted to automotive and aircraft drills.

For more details circle NED-710 G7 on enclosed inquiry slip

Parts Tumbling Machines

Wheelabrator Corp.—Two 12-page catalogs, No. 132-D and 129-D, respectively introduce 7 and 14-cu ft capacity Super Tumblast tumbling machines for cleaning castings, forgings, weldments, heat treated parts and other metal products. Construction details and mechanical specifications are presented in easy-to-understand manner.

For more details circle NED-711 G7 on enclosed inquiry slip

Steel Press Brakes

Dreis & Krump Mfg. Co.—Steel press brakes in 30, 36, 50 and 60-ton capacities are described as to construction features and specifications in 16-page catalog AL-57. Special features described include wide bed and ram for large die area, extension to bed on ram for tubular work, extra deep throat, extra high die space and special controls.

For more details circle NED-712 G7 on enclosed inquiry slip

Hydraulic Cylinders

Vickers Inc.—Recent improvements in design and additional mountings for Vickers Compact hydraulic cylinders are shown in 10-page bulletin 57-68. Construction details and features of 2000-psi cylinders, including the new trunnion-mounted cylinders are provided. Engineering data cover application, mounting, piston areas and speeds, cushion lengths and circuits.

For more details circle NED-713 G7 on enclosed inquiry slip

Stainless Steel Bar & Wire

Armco Steel Corp.—24-page booklet P.O. 4756 describes 45 types of stainless steel available in bar and wire forms, including several special proprietary grades. Advantages, properties, fabrication, electropolishing, ebonizing and supply information are given.

For more details circle NED-714 G7 on enclosed inquiry slip

NEW COMPACT POWERFUL

ELECTRIC VIBRATOR

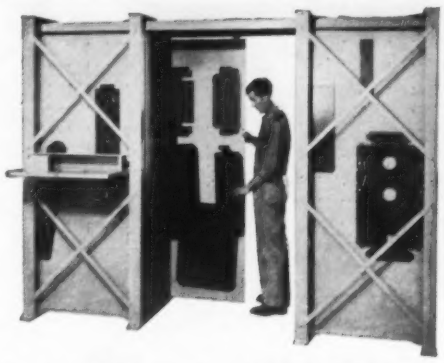
To speed the flow of stubborn material from hoppers, bins and chutes of all sizes and shapes.

Obtainable in all voltage, phase and cycle requirements.

Write today for complete literature.

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

For more details circle NED-715 G7 on enclosed inquiry slip



Nearly 3,000 sq. ft. of steel filing space in 25 sq. ft. of floor space with

DELUXE **TEMPLA-FILE**
(patent pending)

New practical system for vertical filing and storing of templates, patterns, gaskets, and mock-ups.

- Eliminates wasted man-hours locating patterns
- Saves floor space
- Foldaway reference desk holds handy card index file.
- 24 free-sliding panels—each support 600 lbs.
- One Templa-File user states he saved 75% of the time previously used in locating templates.

Call your Deluxe dealer or write for Bulletin #100

DELUXE
DELUXE METAL FURNITURE CO., Warren, Pa.
A Division of the Royal Metal Mfg. Co.

For more details circle NED-716 G7 on enclosed inquiry slip

New Bulletin on
WORM GEARING
for designers and engineers

Yours for the asking
Bulletin 145

Bring your file up to date with this new, complete bulletin on Cleveland worm gear drives. Shows all standard units, with engineering data. Also tells how to plan and order special designs.

THE CLEVELAND WORM & GEAR COMPANY
3283 East 80th Street • Cleveland 4, Ohio
Sales Representatives in all major industrial markets

CLEVELAND
Worm Gear
Speed Reducers

For more details circle NED-717 G7 on enclosed inquiry slip

ONLY NEW HALLOWELL
ERECTOMATIC
STEEL SHELVING

has the unique built-in locking device which cuts assembly time, speeds repositioning of shelves

PLUS THESE FEATURES

- Straight-in, straight-out shelf change
- Independent shelf positioning
- Full use of shelf area
- Common side panels and posts
- Beaded posts and flanged shelves
- Full-depth shelf supports
- 4 classes of shelves

The unique built-in locking device,* developed by SPS for its new ERECTOMATIC® steel shelving, speeds assembly and rearrangement of shelves. To position a shelf—just slide it into place, press the locks, and the shelf is locked. To reposition a shelf—release the locks, pull the shelf straight out, slide it straight in at its new location, and press the locks. It takes only seconds to do the complete job. And shelves below and above, to left or right are undisturbed. For complete information, see your local Hallowell distributor. Or write Hallowell Shop Equipment Division, STANDARD PRESSED STEEL CO., Jenkintown 24, Pennsylvania.

*Patent applied for

STANDARD PRESSED STEEL CO.
HALLOWELL® SHOP EQUIPMENT DIVISION SPS
JENKINTOWN PENNSYLVANIA

For more details circle NED-718 G7 on enclosed inquiry slip

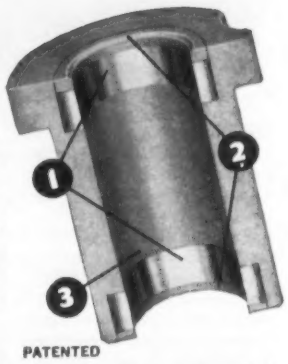
MEYCO CARBIDE INSERTED DRILL JIG BUSHINGS PROVE THEMSELVES

IN Automation !

The reason is simple: these unique bushings are ideally suited for long-running, uninterrupted operations!

MEYCO carbide inserted bushings assure long life for drills, jigs, fixtures . . . accurate work maintained, resulting in less down-time, fewer lost man-hours. Last almost as long as solid carbide bushings, cost slightly more than ordinary bushings. Get the full story:

Write for information and price list, ask for Catalog No. 49.



PATENTED

1. Tungsten carbide rings at the points of wear; 2. Steel rings protect drills and carbide; 3. Special hardened alloy steel body.

EST. 1888

W. F. MEYERS CO., INC., BEDFORD, INDIANA

For more details circle NED-719 G7 on enclosed inquiry slip

FOR LUBRICATION APPLICATIONS IN THE "FRINGE AREA" . . .

specify MOLYKOTE® LUBRICANTS

Extreme pressure or boundary lubrication, without the participation of solid lubricants, is practically impossible.

This basic concept is the foundation upon which MOLYKOTE Lubricants have been built.

Whether we rely on solid lubricants which are already on the surface in the form of thin natural oxide films, or whether we take the necessary steps to introduce these solids on the surface or manufacture them with chemical additives, is immaterial.

To improve on nature's own defensive solids by alloying or supplementing them with more highly qualified solid lubricants is the work of MOLYKOTE, Industry's Most Versatile Lubricant.

Send today for literature.

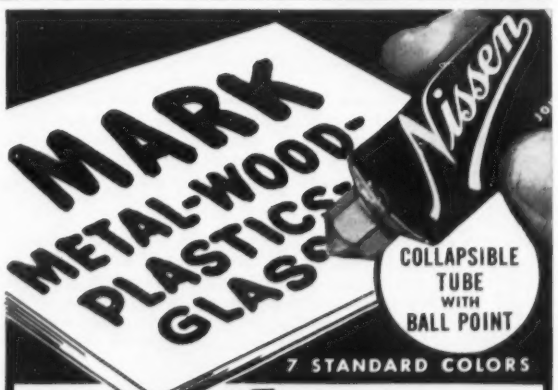
THE ALPHA MOLYKOTE CORP.

Main Factories: 65 Harvard Avenue, Stamford, Conn.
71 Arnulfstrasse, Munich 19, Germany

7512

For more details circle NED-720 G7 on enclosed inquiry slip

MARK METAL-WOOD-PLASTICS-GLASS



WITH THE *Nissen* MARKER

Line 3/64" Thick
Line 1/8" Thick
Line 3/16" Thick

A handy, easy-to-use, ball-point marker for coding, numbering, marking on metal, wood, plastic and glass—smooth or rough surfaces. The tube contains a special, fast drying *opaque* ink that withstands heat and weathering under adverse conditions and will not chip, peel, fade or rub off.

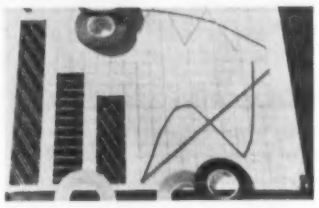
Three different size ball points are available for making fine or broad lines—as illustrated.

JOHN P. NISSEN, JR. CO., *Manufacturers*
GLENSIDE, PA.

For more details circle NED-721 G7 on enclosed inquiry slip

New Processes and Materials

CHART-MAKING TAPES
transparent and self-sticking



Printed in red and suited for photographic, blue and white print reproduction, ACS printed pattern tapes of transparent Mylar are dimensionally stable, nonbrittle and have high strength. Widths from 1/32 to 1 in. are offered in nine patterns. Thin tapes are self-sticking, will not break or tear. They withstand heat and pressure of blueprinting equipment. Made by **American Chart Service, Inc.**, Box 183, Somerville 44, Mass.

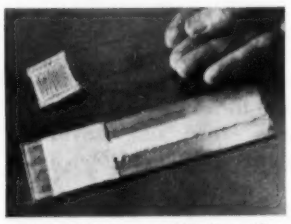
For more details circle NED-722 G7 on enclosed inquiry slip

ALUMINUM FOIL YARN
is braided around insulated wire

Reinforced aluminum foil in yarn form is available for use as a braided conductor around shielded wire and cable. Employed as a static eliminator, yarn is made in widths of 1/32, 1/50, 1/64 and 1/80-in. and is about 0.003-in. thick. Braided around insulated wire, the material remains soft and prevents cutting into the insulation and shorting the wire conductor. The foil yarn is about one-seventh the weight the tinned copper material now used in shielded wire. Made by **Dobeckmun Co.**, Box 6417, Cleveland 1, O.

For more details circle NED-723 G7 on enclosed inquiry slip

REFRACTORY CEMENT
resists shock from −420 to 1000° F

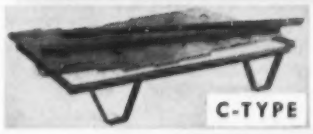


Dielectric and shock resistant throughout its useful range from −420 to 1000° F, CA-9 refractory cement will hold metal, glass or ceramics. Its upper temperature limit can be extended to 1500° F by modifying the composition. Material remains slightly malleable after drying, preventing cracking, crazing or checking, even if used on a constantly flexing surface. Cement is nonhygroscopic, waterproof and unaffected by most reagents or aging. It can be used to attach transducers, strain gages and lead wires. Standard procedure is air drying for 6 hours at 60° F, then curing at 300° F for 2 hours. Made by **Charles Engelhard, Inc.**, Dept. B, 850 Passaic Ave., East Newark, N. J.

For more details circle NED-724 G7 on enclosed inquiry slip

IRONBOUND SKIDS

Full range of sizes, types, capacities, underclearances!



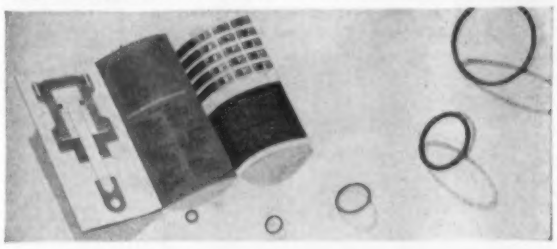
Bolted and welded construction of C-type skids feature easy deckboard replacement.

Ironbound — **IRONBOUND**

55 Hoffman Place • Hillside, N. J.

For more details circle NED-725 G7 on enclosed inquiry slip

NOW! FREE SAMPLES OF LOW-COST RUBBER O-RING OF ± .002" TOLERANCE



I-M'd by Minn. Rubber to resist wear longer

ADVANTAGES: No back-rinding or "flash". No trimming blemishes at parting line. M.R. O-ring tolerances within ± .002 inch. Consistent from piece to piece. Longer flexing life. Tougher structure. Smooth surface.

SAVINGS: Low initial cost. 100% inspection and strict quality control save replacement costs. On-time deliveries save expediting costs, too.

"I. M.": Abbreviation for exclusive modern rubber *injection molding* process originated by Minnesota Rubber, world's largest mfgr. of rubber O-rings. Makes above advantages possible.

FREE SAMPLES: Available in all standard sizes. Technical data included. Just write . . .

MINNESOTA RUBBER and GASKET COMPANY, Dept. 608
Originators of modern rubber injection molding
3630 Wooddale Ave., Minneapolis, Minn.

For more details circle NED-726 G7 on enclosed inquiry slip

safe climb... on a 60° grade!

WITH ALCOA ABRASIVE TREAD PLATE

You *could* do it . . . on Alcoa Abrasive Tread Plate!

Here's a surface with the grip and bite of a grindstone . . . for it's made of the same aluminum oxide particles used in grindstones.

These abrasive particles are rolled right into aluminum — strong, light, rustproof, maintenance-free plate. It stays slip-proof even when wet, oily or greasy. Since the abrasive is rolled in, its slip-proof qualities are more than surface deep!

Use this safer abrasive tread plate wherever hazardous conditions exist. Your safety committee knows where they are.

Just remember that each year 20,000 workers are killed and thousands injured by falls due to slipping. Preventing just a single such accident in your plant makes Alcoa® Abrasive Tread Plate the best insurance you can buy!

Check the coupon for a four-inch sample, ask for complete details. Aluminum Company of America, 1668-G Alcoa Bldg., Pittsburgh 19, Pa.

Your Guide to the Best in Aluminum Value

ALCOA ALUMINUM

THE ALCOA HOUR— Television's Finest Live Drama, Alternate Sunday Evenings

Aluminum Company of America
1668-G Alcoa Bldg., Pittsburgh 19, Pa.

Please send literature and four-inch sample of abrasive tread plate.

Name and Title .....
Company .....
Use Being Considered .....
Address .....
City and State .....

For more details circle NED-727 G7 on enclosed inquiry slip

Self Propelled
AIR COMPRESSOR
for all plant needs

Air compressor and tractor combined—that's the Schramm Standard Pneumatractor. Travels under its own power. Goes where towed compressors can't. Delivers 125 cfm of compressed air for sand-blasting, paint spraying, operating all air tools. Pushes, pulls, powers anything a wheel tractor can handle. Ask local dealer for demonstration or write for free Catalogs 5540 and 5545.

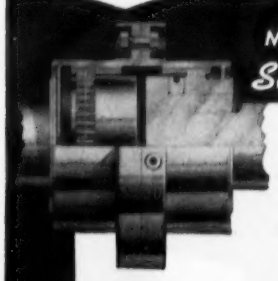
MANUFACTURERS OF AIR COMPRESSORS
Schramm, Inc. 700 North Garfield Ave. West Chester, Pa.

For more details circle NED-728 G7 on enclosed inquiry slip

HOW CAN YOU AFFORD ORDINARY GEAR TYPE COUPLINGS WHEN

AJAX New 3-Degree DIHEDRALS

HANDLE 3-DEGREE MISALIGNMENT at the Same Low Price?



Cut-away view showing arrangement of specially designed gears and location of lubrication seals.

With ability to handle angular and offset misalignment . . . with minimum backlash . . . with perfected lubricant sealing . . . with long life,—AJAX Dihedral Couplings have made ordinary couplings obsolete.

And now AJAX adds this new 3-D Self-aligning Dihedral Coupling at prices competitive with ordinary gear type couplings.

AJAX 3-D Dihedral Couplings will handle misalignment up to three degrees between the driving and driven shafts of direct connected machines. AJAX patented Dihedral tooth design makes it possible to have close tooth clearance with no dependence on backlash for handling misalignment. AJAX 3-D couplings are designed for NEMA motor shafts using standard keys.

AJAX FLEXIBLE COUPLING CO. INC.
WESTFIELD, N.Y.

For more details circle NED-729 G7 on enclosed inquiry slip

CUT PRODUCTION COSTS!
MARK
NAME PLATES
5 TIMES FASTER

MODEL EMT-1
ELECTRIC TAG TYPEWRITER
A touch of the finger delivers up to 2 tons pressure for deep, legible impressions in metal or plastic tags.

—WITH—
Automark
ELECTRIC TAG MARKING MACHINES

MODEL SRST-2
HI-SPEED
TAG MARKING MACHINE
Automatically marks BOTH constant and serial numbers at any desired speed up to 8,000 tags per hour!
MANUFACTURERS' AGENTS
Some Territories Still Available
Send Now for Bulletin

DEFIANCE MACHINE & TOOL COMPANY
1920 S. VANDEVENTER Dep't. OD ST. LOUIS 10, MO

For more details circle NED-730 G7 on enclosed inquiry slip

New Literature & Catalogs

Handling & Shop Equipment & Boxes

Bay Products Inc.—Extensive line of material handling products, steel shop boxes and steel shop equipment are described and illustrated in 20-page catalog. Included are parts bins of many sizes, small parts cabinets, boxes and adjustable compartment drawers, shelf trucks, stock boxes, tool carriers, and service, shelf and stock trucks.

For more details circle NED-731 G7 on enclosed inquiry slip

Electroluminescent Lamp

Sylvania Electric Products Inc.—Principle of electroluminescence—creation of light by excitation of certain phosphors placed in an electric field—explains the Panelescent lamp. Detailed in a 4-page illustrated brochure, it is used for clock radio faces, radio dials, thermometers and switch plates.

For more details circle NED-732 G7 on enclosed inquiry slip

Teflon & Its Use in Clamps

TA Mfg. Corp.—Up-to-date information on Teflon, including chemical, thermal, electrical and ageing properties and methods of handling it is found in 20-page illustrated engineering handbook. Seven models of Teflon-insulated clamps, available in 18 standard types, are described and illustrated.

For more details circle NED-733 G7 on enclosed inquiry slip

Bobbins for Winding Yarn & Wire

National Vulcanized Fibre Co., Lestershire Spool Div.—Standard and special bobbins made from vulcanized fiber, Phenolite laminated plastic, close-grained northern maple, steel, aluminum and special alloys are subject of 12-page catalog 6572. Applications illustrated include winding of textile threads and yarn, fine wire, blasting fuse cord, flat copper wire and aluminum strip.

For more details circle NED-734 G7 on enclosed inquiry slip

Flexible Metal Hose & Bellows

Flexonics Corp.—Data basic to making preliminary selection of flexible metal hose and bellows are given in 16-page catalog 156. Bellows are made in stainless steel and Monel, brass and phosphor bronze with inside diameters from 5/16 to 12⅞ in. Flexible metal hose data covers corrugated, and convoluted constructions for pressures up to 3100 psi and heats to 1600° F.

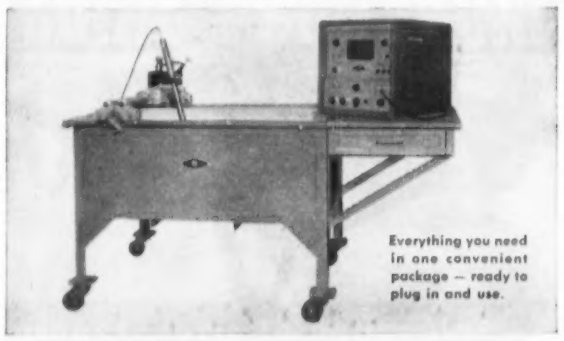
For more details circle NED-735 G7 on enclosed inquiry slip

Metal Shearing Aids

Hill Acme Co., Cleveland Knife Div.—Types, sizes and grades of Cleveland metal cutting knives best suited to all types of metal shearing are descriptively covered in 16-page brochure "Metal Shearing Aids." Slitters, squaring blades, alligator and bar knives are among the many types described. Also discussed are care and handling, best cutting practice and recommended grades for various operations.

For more details circle NED-736 G7 on enclosed inquiry slip

ULTRASONIC INSPECTION



Everything you need in one convenient package — ready to plug in and use.

COMPLETE, THRIFTY PACKAGE
for immersed nondestructive testing of metals

- Low cost "package" unit combines all components for complete immersion testing
- Contains Immerscope, four-foot tank, search tube and rack, precision manual manipulator, manual scanning mechanism and crystals
- Ultrasound penetrates metals, defects appear as pips on cathode ray tube of Immerscope
- Ready to plug in and use

Complete information on request

INDUSTRIAL AND SCIENTIFIC PRODUCTS DIVISION
CURTISS-WRIGHT
CORPORATION • CALDWELL, N. J.

CURTISS-WRIGHT OF CANADA, MONTREAL • CURTISS-WRIGHT EUROPA, AMSTERDAM

For more details circle NED-737 G7 on enclosed inquiry slip

Save lubrication time and money with

This sturdy lever gun develops up to 10,000 pounds of pressure. Handles all regular pressure gun greases. Long operating handle for maximum leverage. Loader fitting for fast, clean filling (or gun may be filled by suction). Heavy steel linkage maintains piston alignment. Follower rod disappears after filling. Capacity, one lb., outlet ⅛" p.t. Spring or ram-primed.

An Alemite grease gun for every lubrication need!
- Models for light, medium and heavy greases.
- Long-wearing lever gun hoses for hydraulic, pin-type or button head fittings.
- Sizes and capacities for every lubrication job.

Write for free catalogs and complete information, to:
Alemite, Dept. L-77
1850 Diversey Parkway, Chicago 14, Illinois

A PRODUCT OF SW STEWART-WARNER
ALEMITE
Products of STEWART-WARNER CORPORATION

For more details circle NED-738 G7 on enclosed inquiry slip

With Lapping Plate

Work clamped to motorized table, mounted on sine plate. Surface grinder application.

FASTER
circular precision grinding!

Now with this table and with less effort you assure highest standards of accuracy, flatness, finish and close tolerances. At the same time you eliminate slow and complicated tool setups. You cut grinding time greatly by using only cross feed while the table is rotating at infinite speeds between 40 and 100 RPM.

For example, Vulcan's Rotary Table can be used in connection with a sine plate or angle fixture. The dressing of large expensive external wheels for side grinding is therefore eliminated. If you wish we can provide permanent magnetic chucks designed for use with our table, both 6" and 10" in diameter.

Vulcan's Rotary Table is an air operated, self contained unit, portable between bench or machine. A precision center hole for locating and tapped holes in the table for clamping provides easy setup. Circular surface grinder applications are many and varied — grind flanged studs or bushings — bearing spacers — forming rolls — cutters — convex or concave surfaces — punches or dies (radius or angle).

Lapping? Yes — and in micro inches. For the 6" and 10" table, lapping plates of 12" and 16" are provided. Perfect for lapping valve plates, gages, bearing spacers and for carbide lapping using diamond powder. *Write for circular.*

Major Vulcan Services
Engineering, Processing, Designing and Building....Special Tools.....Dies..... Special Machines....Vulcamatic Transfer Machines....Automation....including the Vulcan Hydraulics that Form, Pierce, Assemble and size. Vulcanaire Jig Grinders ...Motorized Rotary Tables...Plastic Tooling.

Write on your letterhead to
VULCAN TOOL CO.
739 LORAIN AVE. DAYTON 10, OHIO

For more details circle NED-739 G7 on enclosed inquiry slip

VEEDER-ROOT

with Veeder-Root
VARY-TALLY

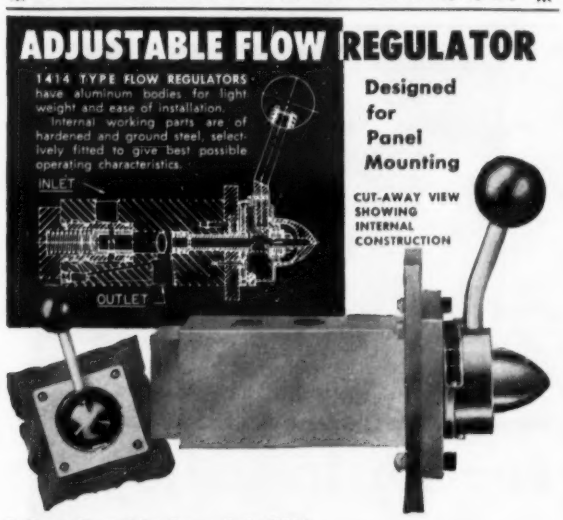
Rejects . . . inventories . . . sales by items . . . sizes . . . colors . . . work-assignments . . . prices . . . whenever you need to keep accurate count of details that would otherwise be tallied by hand . . . get Veeder-Root's VARY-TALLY, the multiple-unit reset counter that counts everything countable.

Arranged compactly on stands in tiers, Vary-Tally can be supplied in almost any combination or numbers of counters, right down to single units. Write for prices. **Veeder-Root Incorporated, Hartford 2, Connecticut.**

"The Name that Counts"

For more details circle NED-740 G7 on enclosed inquiry slip

ADJUSTABLE FLOW REGULATOR



Designed for Panel Mounting

Fully adjustable from 0.5 GPM to 20 GPM. Maintains a constant rate of flow regardless of work resistance or pressure fluctuations.

Also SOLENOID VALVES, MICRONIC LINE FILTERS and CHECK VALVES.

Write for latest illustrated bulletin H

WATERMAN ENGINEERING COMPANY
725 CUSTER AVENUE EVANSTON, ILLINOIS

For more details circle NED-741 G7 on enclosed inquiry slip

THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICHIGAN

For more details circle NED-742 G7 on enclosed inquiry slip

New Processes & Materials

LATEX PAINT EMULSION
high gloss water thinned type

Water thinned latex paints with high gloss can be produced from a polyvinyl acetate emulsion formulated with extremely small resin particles, wetting agents and protective colloids. When mixed into paint, particles do not touch each other, but when the paint is spread the water in which they are dispersed evaporates. They then fuse to form a durable surface. Paint is easily applied, has no objectionable odor, and is rapid-drying, washable with soap and water and fire-resistant while being applied. White paint made with the formulation registers 75-80 gloss units on a 0-100 scale when viewed with a gloss meter (see photo). Emulsion only is available from **Celanese Corp. of America,** Dept. 550, 180 Madison Ave., New York 16, N. Y.

For more details circle NED-743 G7 on enclosed inquiry slip

THERMOPLASTIC RESIN SPRAY
for protection of metals, ceramics

Low loss dielectric properties and good chemical resistance to acids, alkalies, salts and organic solvents are offered by Polyfluoron thermoplastic resin for spray coating of small metal and ceramic items. Offered in pushbutton aerosol container, the coating requires heating to 480° F for fusion. Baking time depends upon size and cross section of work. Film thickness can be varied by building up light coatings, allowing up to 5 minutes between applications. Use is for tank and pipe linings, general maintenance finishes, moisture seals, and magnet wire insulation. Stirring rods, laboratory containers, aluminum beakers, silicon rubber gaskets, bus bars and other items can be coated. Made by **Acme Resin Corp.,** 1401 Circle Ave., Forest Park, Ill.

For more details circle NED-744 G7 on enclosed inquiry slip

MASONRY SEALER
combines synthetic rubber, silicone

Water penetration of brick, concrete, concrete and cinder block, stucco and gypsum surfaces can be halted without altering their external appearance

with Water-Stop, an invisible type waterproofing liquid. Sealer is formulated from Goodyear Pliolite S-5 synthetic rubber resin and a silicone resin. The former adds water resistance, toughness and durability, whereas latter provides high penetration and water repellency. Only linings of pores are coated, allowing transfer of water vapor. Sealer is brush or spray gun applied in two coats. Sealed surfaces reportedly stay cleaner and resist spalling, cracking or efflorescence. On brick, water absorption is reduced from 16.9 to 0.01-per cent. Formulated by **Clover-Leaf Paint & Varnish Corp.,** 43-43 Vernon Blvd., Long Island City 1, N. Y.

For more details circle NED-745 G7 on enclosed inquiry slip

DRAWING SURFACE FILM
made of reprocessed Mylar film

Stabilene opaque drawing surface film is intended for drawings that are subject to frequent handling or alteration over a period of years. Film is DuPont Mylar, reprocessed for additional flatness and dimensional stability. In addition to high tear strength, durability and flexibility, the film is resistant to moisture, will not smudge and can be wiped clean with a moist cloth. Dimensional stability averages 0.000006-in. per inch in both directions for temperatures from 80 to 220° F and in 0 to 98 per cent relative humidity. Film takes pencil and ink well without feathering, penetration or ghosting, even after making erasures. Hard pencils can be used. Made by **Keuffel & Esser Co.,** 300 Adams St., Hoboken, N. J.

For more details circle NED-746 G7 on enclosed inquiry slip

LOAD FROM GROUND QUICKLY
—and on the level

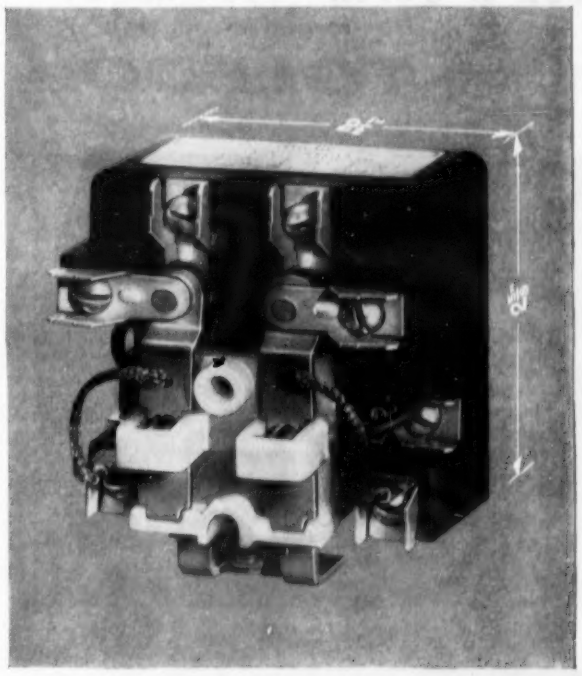
Trucks and trailers are loaded and unloaded—without manual lifting or pushing, without tilting or breakage—with Globe Loading Lifts. Handling costs are reduced, damage to goods and safety hazards eliminated.

Easily installed at low initial cost, inside or out. Platform raises to height of 58", lowers level to floor. Sturdy power cylinder operated by air-oil unit or Globe Oil Pump. Push-button control if desired. Immediate shipment.

Write for complete data. Globe Hoist Company, East Mermaid Lane at Queen Street, Philadelphia 18, Penna.

GLOBE® LOADING LIFT
PLANTS: DES MOINES—PHILADELPHIA—LONG BEACH, CAL.

For more details circle NED-747 G7 on enclosed inquiry slip



10-amp relay fits in 6.5 square inches

THAT'S SPACE SAVINGS! When relay mounting space is tight, and long life is a must, Type Z is your answer. It outlives many millions of operations, yet fits an area 2½" x 2⅝".

Not only is the Type Z small, but both coil and core are easily accessible from the front. No provision for disassembly space is needed.

This powerful little relay meets U. L. Standards for 300-volt operation. Silver contacts are rated for continuous 10 amps at 300 volts. It is a 2-pole relay with double-pole, double-throw contacts and can be fitted for either a-c or d-c use.

Booklet B-7073 contains information on the Type Z and several other Westinghouse relays. Send your request to: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa. J-30271

YOU CAN BE SURE...IF IT'S
Westinghouse

For more details circle NED-748 G7 on enclosed inquiry slip

Gary WELDED GRATING

TAILOR MADE INSTALLATIONS

- Cost Less
- Look Better
- Give Better Service...

Eliminate expensive field alterations, piecing together and wasted material and labor by specifying Gary Welded Grating. Designed for specific loads and deflections, Gary grating is as easy to specify as it is to install. Gives maximum ventilation and illumination and long-maintenance-free service. Write for full information . . . ask for Bulletin N-77.

ROCKWELL SPRING & AXLE CO.
Standard Steel Spring Division
4017 EAST SEVENTH AVE., GARY, INDIANA

For more details circle NED-749 G7 on enclosed inquiry slip

FOR A QUICK "PICK-ME-UP"
new drop-forged aluminum
TOLEDOs

What's wrong with doing it easier? Here's a pipe wrench with virtually the strength of steel at HALF the weight! A wrench that's SAFE—and unconditionally guaranteed! Available in all popular sizes—10", 14", 18", 24" and 36". Three heavy-duty types meet all requirements: • Drop forged aluminum handle and hook with forged steel insert jaws and adjusting nut. • Drop forged aluminum handle and drop forged steel hook and adjusting nut. • Drop forged aluminum handle and hook with non-sparking insert jaws, spring and adjusting nut. Give yourself a break with a new lightweight, heavy-duty TOLEDO.

Quality Checked
BUILDERS OF THE WORLD'S FINEST PIPE TOOLS
TOLEDO
PIPE THREADERS • PIPE WRENCHES • PIPE MACHINES
The Toledo Pipe Threading Machine Co.
Toledo 4, Ohio

For more details circle NED-750 G7 on enclosed inquiry slip

When Your Process Demands a Filter, Mixer or Mixing Tank

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Clip and Mail This Coupon For Complete FREE Alsop Catalog

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GENTLEMEN:
Please send me FREE, your new catalog, "Liquid Processing Equipment"
Name .....
Company .....
Address .....

For more details circle NED-751 G7 on enclosed inquiry slip

New Literature & Catalogs

Gas Equipment

Linde Co.—Industrial gas manifolds with automatic controls and acetylene generators with 100 to 9000 cfh capacities are among products covered in 24-page Oxweld catalog 4486 section 4. Recommended uses and specifications for gas piping systems are included.

For more details circle NED-752 G7 on enclosed inquiry slip

Custom-Molded Plastics

Sylvania Electric Products Inc.—Sections on molding facilities, finishing and assembly of components, research and development, and quality control are content of 12-page booklet on custom-molded plastics for industry. Injection, compression and transfer molding are covered, as are various plastic materials.

For more details circle NED-753 G7 on enclosed inquiry slip

Thermistors

Gulton Industries, Inc., Thermistor Div.—Specifications and characteristics of wafer, rod and bead thermistors are found in 10-page bulletin T-100. Typical applications and circuitry are listed and each type is illustrated with diagrams and charts. Table shows resistance ratio vs. temperature.

For more details circle NED-754 G7 on enclosed inquiry slip

Storage Bins

Neff & Fry Co.—Super-Concrete Stave storage bins for industry are described and how they are engineered to requirements is explained in 4-page illustrated bulletin. Roof can carry conveyors, separators, crushers, cyclones or other equipment, without other supports. Sizes and capacities are given in tables.

For more details circle NED-755 G7 on enclosed inquiry slip

Pneumatic Process Control

Leeds & Northrup Co.—Standard and optional features of the Speedomax G pneumatic controllers are described in 12-page folder ND4(9). Used for fast, positive control of process unit in industry, the control affords the advantages of electronic null-balance measurement in combination with a pneumatic control system.

For more details circle NED-756 G7 on enclosed inquiry slip

Ground Material Handling System

Young Machinery Co.—A typical Transvair system handling finely ground dry and abrasive material at 400° F from grinder to storage bin is illustrated in 4-page bulletin T-V 553. Applications and advantages are pointed up.

For more details circle NED-757 G7 on enclosed inquiry slip

Circulating Oil System

Farval Corp.—Lubrival circulating oil system described in 8-page bulletin 70 finds application on presses and semiautomatic or automatic machine tools. It features built-in oil return arrangement and monitors its own operation through pressure sensing mechanism to warn of clogged or broken lines in any part of the system.

For more details circle NED-758 G7 on enclosed inquiry slip

Hand Lever Punches

W. A. Whitney Mfg. Co.—Hand, bench and hydraulic punches ranging in capacity from ¼-in. hole in 16-gage metal to ½-in. hole in ¼-in. stock are listed with appropriate punch and die sizes in 32-page catalog 10. All parts of these tools are drop-forged of high grade alloy steel and heat treated. Illustration of repair parts for hand units is a highlight.

For more details circle NED-759 G7 on enclosed inquiry slip

Lab Safety Manual

Fisher Scientific Co.—Pocket-size, illustrated "Manual of Laboratory Safety" covers accident prevention, first aid, fire prevention and safety equipment, and concludes with a safety bibliography. Sections cover handling radioactive materials, as well as the use of isolation units for hazardous microbiological and clinical procedures.

For more details circle NED-760 G7 on enclosed inquiry slip

Retracting Cord Reels

Vacuum Cleaner Corp. of America, Cordomatic Div.—Among the automatically controlled retracting cord reels described in 16-page catalog 57 are drop light, static discharge, display light, job light, multiple outlet, balance and clothesline reels as well as shop light handles, drop light cord sets and load guards. Several new products are introduced.

For more details circle NED-761 G7 on enclosed inquiry slip

FREE NEW 180 PAGE WELDING GUIDE

NEW ALLOYS—NEW TECHNIQUES!
NEW INDEX SYSTEM FOR QUICK USE

VALUABLE FOR SHOP FOREMEN, WELDORS, PURCHASING AGENTS!

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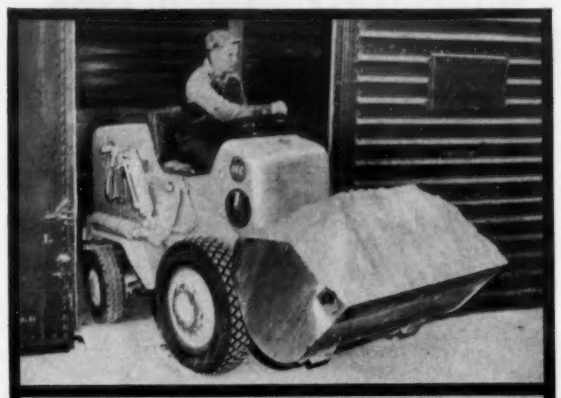
EUTECTIC WELDING ALLOYS CORP.
40-40 172nd St., Flushing 58, New York, N. Y.

For more details circle NED-762 G7 on enclosed inquiry slip



for Unloading..

The new model HA "PAYLOADER" tractor-shovel is more than an efficient labor-saving tool to unload boxcars and trucks. A pick-up sweeper attachment can be added to the bucket in a few minutes to clean-up plant floors, aisles, driveways and storage areas as well. This is one example of how a basic "PAYLOADER" unit and its easily interchanged attachments can solve many material handling problems. In addition to the sweeper, lift forks, tine buckets, snow plows and various bucket sizes and types are available for quick interchange. GET ALL THE FACTS on the multiple-tool usefulness and operation of the model HA "PAYLOADER" from your nearest Distributor. Ask for a demonstration. The Frank G. Hough Co., 746 Sunnyside Ave., Libertyville, Ill. 101

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MANUFACTURED BY
THE FRANK G. HOUGH CO. LIBERTYVILLE, ILL.
SUBSIDIARY—INTERNATIONAL HARVESTER COMPANY
746 Sunnyside Ave., Libertyville, Ill.

For more details circle NED-763 G7 on enclosed inquiry slip

Wolverine TOGGLE CLAMPS

CHECK THESE FEATURES ON YOUR PRESENT TOGGLE CLAMPS

- Drop Forged Arms for maximum strength
- Heavy Body section for easier welding
- Case Hardened Bushings and Pins for better wear
- Flush Riveted Pins for more thrust bearing
- Black Oxide Finish for rust resistance without weld interference

SINCE 1926

CQ-800 SERIES

WOLVERINE TOGGLE CLAMPS

Also available in several types and sizes of Standard Action and Push Action Units.

CQ-1100 SERIES

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WOLVERINE TOOL CO.

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For more details circle NED-764 G7 on enclosed inquiry slip

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Low Cost Bench Model!

MODEL SU-6 ELECTRONIC BALANCER HANDLES ANY ROTATING BODY from 4 ounces to 100 pounds. Diameters to 20 inches.

Requiring minimum space, minimum fixturization, and featuring extreme simplicity of operation, the SU-6 Dynamic Balancer is completely electronic in both detection and location of unbalance. It provides direct, precise reading of magnitude and position of unbalance. For manufacturers and shops seeking a precision machine with great range and versatility, the SU-6 offers the very finest characteristics at the lowest price available!

WRITE FOR COMPLETE INFORMATION.

M-B MICRO BALANCING, INC.

Herricks Road, Garden City Park, N. Y.

Most Famous Name In Dynamic Balancers

For more details circle NED-765 G7 on enclosed inquiry slip

NEW FORD solid carbide END MILLS

WHY THEY DO YOUR JOB BETTER

All Ford end mills are *precision machine ground from the solid* . . . which insures uniformly accurate flute form and a constant relief angle. On your job, that means more parts per grind. So you save labor on grinding and tool changing. You save on replacements. You save on downtime. What's more, there's less time per part, more parts per hour, fewer rejects. Available in 11 types . . . all standard, and *available*.

BULLETIN 510 FREE AND LATEST PRICES . . . WRITE TODAY

Rotary FORD Tools

M. A. FORD MFG. CO., INC.

721 W. River St., Davenport, Iowa

Precision manufacturer of H. S. S. and Carbide Rotary Files and Cutters. Countersinks • Grinding Burrs • Special Tools • Factory Regrinding

For more details circle NED-766 G7 on enclosed inquiry slip

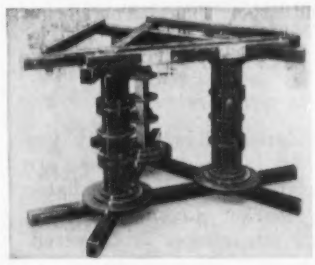
New Processes & Materials

INSULATING ENAMEL in spray and brush-top containers

Air-drying No. 30 red electrical insulating enamel, available in two types of applicator cans, can also be thermoset with a short bake at 200 to 220° F. A 12-oz pressurized can permits easy spraying of electrical components, motor coils, stators and commutator ends to protect them from moisture, oil and chemicals. The 8-fl oz brush-top container is for applying heavier layers of the sealer. Brush coat air dries to permit handling in about 3 hours and is hard after 8 hours. Enamel has a dielectric strength of 850 v per mil. Made by **Minnesota Mining & Mfg. Co.**, Irvington Div., Dept. NED, 6 Argyle Terrace, Irvington 11, N. J.

For more details circle NED-767 G7 on enclosed inquiry slip

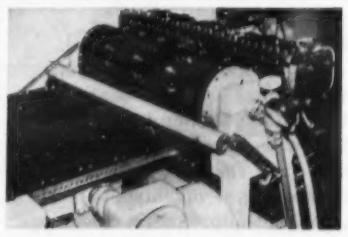
DENSIFIED WOOD LAMINATE sheets, rods, machined parts offered



Switchgear operating rods, tap changer shafts, coil clamping rings, insulating studs and nuts, and packing blocks and end shields for rotating machinery are among applications for Permali, an impregnated densified wood laminate. The high dielectric strength material is produced in sheet, rod and machined component forms in lengths up to 13 ft and thicknesses to 5 in. Photo shows bracing structure of a 25,500 kvar coreless reactor. Made by **Permali, Inc.**, 5500 Birdgeport St., Mt. Pleasant, Pa.

For more details circle NED-768 G7 on enclosed inquiry slip

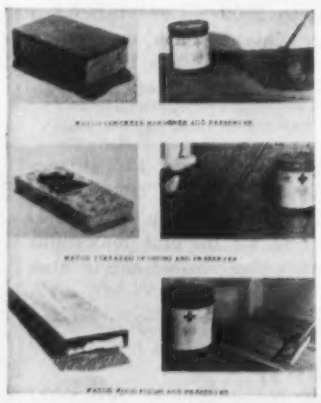
VACUUM FORMED PLASTIC 24 in. wide, is formed continuously



Continuous method for vacuum forming sheet plastic takes sheet directly from an extruder and, while still warm and soft, passes it over a vacuum roll where it is formed in the desired pattern. Styrene, polyethylene, acetate, butyrate and other materials can be formed by this method. Present equipment makes sheets 24 in. wide in continuous lengths, with thickness varying from 0.008 to over 0.080-in. Sheet can be any color as well as black, white, transparent or translucent. Process affords relatively low cost formed sheet for widely diversified applications. Service offered by **Quick Plastics**, 1775 Cooper St., Jackson, Mich.

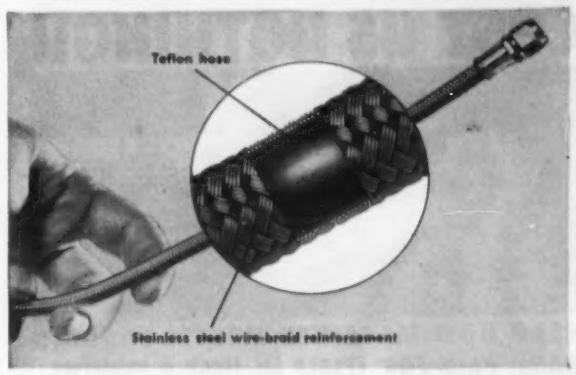
For more details circle NED-769 G7 on enclosed inquiry slip

FLOOR PRESERVERS for concrete, terrazzo and wood



Single application of deep penetrating Watco floor preserving products offers long term protection to new and old concrete, terrazzo, and interior and exterior wood surfaces. Concrete and terrazzo are rendered permanently nondusting. Surface film will not wear away, being a stratum of synthetic resins that becomes a part of the floor as it penetrates. As it solidifies, it fills and seals the pores against absorption of water, acids, alkalies, petroleum products, salt solutions, detergents and animal and vegetable fats and oils. Made by **Watco-Dennis Corp.**, 1644 Twentieth St., Santa Monica, Calif.

For more details circle NED-770 G7 on enclosed inquiry slip



TEFLON HOSE FOR TOUGH NEW PROBLEMS

This is American's new *Teflon** flexible hose. Heat-resistant, corrosion-proof, lightweight, it offers the double advantage of economy and longer life in tough industrial jobs—where lines are subjected to outdoor exposure or attack by chemicals, or where high temperatures are a factor—and in aircraft, guided missiles and atomic energy fields. Typical applications: fuel lines, oxygen lines, hydraulic lines and others.

BULLETIN TF-100 gives full information. For free copy, write: The American Brass Co., American Metal Hose Div., Waterbury 20, Conn.

*DuPont trademark for its tetrafluoroethylene resin. 57201

WHEREVER CONNECTORS MUST MOVE AMERICAN Flexible Metal and Teflon Hose and Tubing

an ANACONDA® product

For more details circle NED-771 G7 on enclosed inquiry slip

For Proper, Low-Cost Replacement and Maintenance

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World's Largest Selection of Low-Cost Lubricating Devices

LUBRIKIT... An assortment of 95 oil cups of 29 different types. Gits sales records show these oilers are most used for replacement and maintenance. Contents of each separate bin are clearly described on inside cover.

Special Introductory Price JUST $14.95 F.O.B. FACTORY

Satisfaction or Your Money Back

SIGHT GRAVITY FEED MULTIPLE OILERS

This one unit replaces 3 to 8 individual oilers. Maximum practicality in a small central lubrication system. Positive cut-off during idle periods. Individual vibration-proof needle valve adjustments. With solenoid control (Illustrated): Style MDS—No. 4685-A. Without solenoid: Style MD.

Too much machine "down-time"? Too much time wasted in servicing your machinery? Perhaps some old, worn lubricating devices need replacement. Maybe a different, more modern device will do the job more efficiently. Whenever you replace, specify GITS Lubricating Devices—the widest selection available anywhere, right in stock. The items pictured above are only a few of our many thousands of lubricating devices. Send NOW for your free Catalog.

GITS BROS. MFG. CO.

The Standard For Industry For Almost Half A Century

1833 South Kilbourn Avenue

Chicago 23, Illinois

For more details circle NED-772 G7 on enclosed inquiry slip

COST US NOTHING!!

READ HOW MAGLINER MOBILE LOADING RAMP PAID FOR ITSELF IN JUST 4 MONTHS

PROBLEM—*A ground level plant, Millington Mfg. Co., Upper Sandusky, Ohio. Lack of dock facilities necessitated costly hand loading and prevented efficient in-plant material handling.*

SOLUTION—Incoming shipments are now unloaded by power trucks using a Magliner magnesium Mobile Loading Ramp. One man unloads a 20,000 lb. shipment in 20 minutes that formerly took 12 to 16 manhours. Company now receives materials in 1,000 lb. containers (formerly 50 lb. bags)—effecting extra savings in processing and feeding presses. In the words of the manufacturer, "Our Magliner paid for itself in 4 months." *Actually, cost us nothing!*

Do you have an older building . . . need extra or movable dock facilities . . . want to avoid costly hand loading? A Magliner Mobile Loading Ramp is the practical solution. A loading dock on wheels, where you want it . . . when you want it! One man moves it.

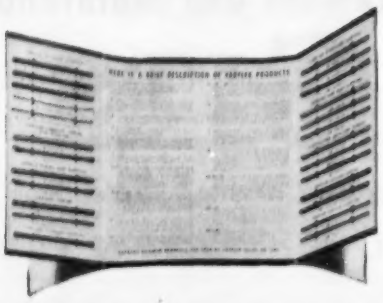
Write for Bulletin DB-211
MAGLINE INC., P.O. Box 157
PINCONNING, MICHIGAN

MagLiner MAGNESIUM
Mobile Loading Ramps

Canadian Factory Magline of Canada, Ltd., Renfrew, Ontario

▲ For more details circle NED-773 G7 on enclosed inquiry slip ▲

Send for this *Free* SAMPLE FOLDER...



Contains 25 different test samples of high-dielectric Insulating Tubing & Sleeving.

Includes samples and descriptions of: Varglas Silicone • Varfil Sleeving and Tubing, polyester resin impregnated Fiberglas • Varglas Tubing and Sleeving • Varglas Non-Fray Sleeving • Varflo Tubing and Sleeving • Varflex Cotton Tubing and Sleeving • Syntholvar Extruded Tubing

Write today!

VARFLEX CORPORATION

510 W. Court St. Rome, N. Y.

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Big Beam
AUTOMATIC EMERGENCY LIGHTS
with Glass Jar Batteries

GUARD AGAINST
THE HAZARDS OF
SUDDEN BLACKOUTS

Big Beam Model 2ATW-GJ features a heavy-duty, 30-40-80 or 100 amp.-hr., long-lived, glass jar battery—especially designed for emergency lighting service. Built-in trickle charger and fast charger (with 12-hour automatic timer) keep battery charged at all times. Also available with nickel cadmium battery.

Sudden blackouts breed a multitude of hazards—confusion, panic, property damage . . . even death. Protect yourself from these costly hazards; install Big Beam automatic emergency lights by merely plugging in to existing lighting outlets. When regular lights fail, Big Beam will provide many hours of bright, safe illumination.

Big Beam PORTABLE ELECTRIC HAND LAMPS

EXPLOSION-PROOF HAND LAMP Model No. 287 EX for use in hazardous locations, Class I, Group D

Model No. 166 with SEALED BEAM Bulb

Many Other Models Available

Write for Complete Information— 6549

U-C-LITE MFG. CO. 1073 W. Hubbard Street, Chicago 22, Illinois

IN CANADA: Bernard Marks & Co., Ltd., 70 Claremont St., Toronto 3, Ont.

▲ For more details circle NED-775 G7 on enclosed inquiry slip ▲

New Literature & Catalogs

Metal Cutting & Gouging Process

Arcair process which uses an electric arc and compressed air is detailed in 36-page pocket size manual. Sections on operating principles, current requirements, instructions on gouging, cutting, flushing and beveling, assembly procedure and applications for various industries are included. Available for 25 cents per copy from Arcair Co., 423-A S. Mt. Pleasant St., Lancaster, O.

▲ For more details circle NED-776 G7 on enclosed inquiry slip ▲

Screw Pumps

Warren Pumps, Inc.—Basic construction and design of line of standard screw pumps are shown in 6-page illustrated bulletin S-206. Featured are double external bearing and gear type and double external bearing and gear hopper type. Low viscosity material capacities range up to 3000 gpm. Specifications are given.

▲ For more details circle NED-777 G7 on enclosed inquiry slip ▲

Ultrasonic Gaging

Branson Instruments, Inc.—Fast nondestructive testing is possible with the Vidigage, an ultrasonic resonance instrument described and illustrated in 8-page bulletin V-200. It measures thickness of metal, glass and plastic from one side, and finds corrosion, laminar discontinuities and other flaws. Application data are included.

▲ For more details circle NED-778 G7 on enclosed inquiry slip ▲

Building a New Plant?

Gardner Industrial Foundation—Reasons why you should locate your new plant in Gardner, Mass., are presented in two well-illustrated brochures. Available buildings and sites, labor market advantages, civic attributes and geographical advantages are covered.

▲ For more details circle NED-779 G7 on enclosed inquiry slip ▲

Casters & Wheels

Fairbanks Co.—Photographs and cutaway sections illustrate line of industrial casters and wheels in catalog C-57. Included are regular and medium-heavy duty Lockweld steel casters, Lamilon all-plastic nylon-reinforced wheels, steel casters for heavy duty and trailer use, vulcanized rubber-tired wheels, solid rubber and pneumatic rubber-tired wheels and semisteel wheels.

▲ For more details circle NED-780 G7 on enclosed inquiry slip ▲

Powder Metal Parts

Asco Sintering Corp.—Self-lubricating oil-impregnated bronze and iron bearings including sleeve, flange and thrust washer types are subject of illustrated 16-page catalog 57. Companion bulletin discusses production facilities for making porous metal filters, sintered metal machine parts, soft iron magnets and special oil-impregnated bearings.

▲ For more details circle NED-781 G7 on enclosed inquiry slip ▲

Brass Tube Fittings

Weatherhead Co.—The complete line of Weatherhead brass tube fittings as well as drain and shutoff cocks is detailed in 48-page catalog. Also described are push-pull controls, proper installation of brass fittings, the right and wrong ways for tubing a system, tube fitting data and tools.

▲ For more details circle NED-782 G7 on enclosed inquiry slip ▲

Air for Industry

Cooper-Bessemer Corp. — Capacities, specifications and typical data for motor-driven compressors with outputs ranging from 200 to 2000 hp are tabulated in 44-page catalog M-81. This bulletin is entitled "Industrial Air."

▲ For more details circle NED-783 G7 on enclosed inquiry slip ▲

Slitter-Rewinders

Black-Clawson Co., Dilts Div.—Type TD slitter-rewinders for use by converters of paper, board, film, foil and cloth are subject of 8-page catalog 21-DM. Width capacities range up to 92 in. and maximum speeds are 3000 fpm. Unwinding equipment is also shown.

▲ For more details circle NED-784 G7 on enclosed inquiry slip ▲

Gaging With Nuclear Energy

Tracerlab, Inc.—Written for technical personnel concerned with gaging sheet materials of all types, 36-page technical handbook presents basic information on radiation gaging of a wide range of materials with beta rays. Equipment and techniques are discussed.

▲ For more details circle NED-785 G7 on enclosed inquiry slip ▲

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FOR INSULATION ANCHORS and FASTENERS
Use **Stic-Klips®**

- No Surface Drilling
- Quick Fastening
- Strong Positive Bond

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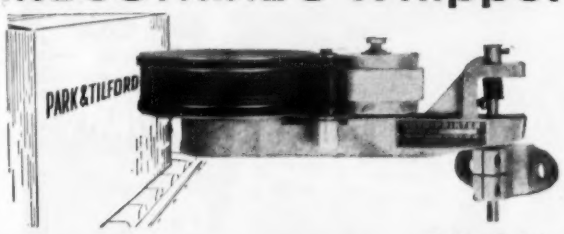
Application takes only seconds. All you do is apply a thin coat of Stic-Klip ® adhesive to the base of a Stic-Klip ® fastener with a putty knife. Apply another thin coat as primer base on porous surface area. Place Stic-Klip ® fastener to primer base until adhesive fills holes. Clean off excess adhesive with putty knife.

Write for your application bulletins, Today!

Stic-Klip® MANUFACTURING CO.
64 Regent St. Cambridge 40, Mass.

▲ For more details circle NED-786 G7 on enclosed inquiry slip ▲

NO. 1 SPECIALIST IN THE MARKING FIELD
INDUSTRIAL'S Whippet



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Versatility . . . automatically imprints cartons, bags, rolls, cans, containers and packages — as you need them during production line runs.
Low cost . . . "Whippet" sells low, seldom requires attention or maintenance.
Capacity . . . works non-stop at production lines speeds. No misses or overprints.
Simple Operation . . . attaches quickly and easily direct to conveyor line; non-oscillating friction head uses interchangeable rubber type for clear, legible impressions.
Saves . . . expensive hand stencilling, pre-printing, storage and inventory costs.

Proved practical and economical on almost any marking problem — in plants all over the country — "Whippet" is so simple, well designed and manufactured that experience proves they serve faithfully and profitably far beyond ordinary equipment. See how they can improve your operation.

Write for details and catalog today! Dept. NED

ime INDUSTRIAL MARKING EQUIPMENT company, inc.
454 BALTIC STREET BROOKLYN 17, N.Y. MAin 4-2601

▲ For more details circle NED-787 G7 on enclosed inquiry slip ▲

FACTS about electric brakes and clutches

Just off the press—attractive new booklet in digest form, free. Find out about Warner's unique features—get easy-to-read facts about *electric motion control* for miniature mechanisms or high-torque machine drives: Ask for Catalog Digest No. 6292!

WARNER

Pioneers of
ELECTRIC BRAKES AND CLUTCHES
Industrial Division
Warner Electric Brake & Clutch Co., Beloit, Wis.

▲ For more details circle NED-788 G7 on enclosed inquiry slip ▲

For Dependable Flow Control!

THE DAVIS NO. 60 FLOAT VALVE

. . . use

DAVIS FLOAT VALVES

ENGINEERS interested in working out efficient, trouble-free fluid level and flow control hookups will find a wide choice of units offered in the Davis line of float valves, float boxes, and fluid control valves.

For Float Valve dependability the Davis No. 60 is unexcelled. Here are a few of its outstanding features:

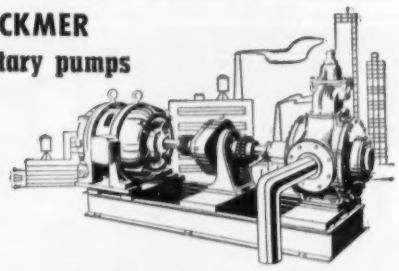
1. The Famous Davis Single-Seat Pilot Stem Valve! Tight-closing and non-sticking. Standard sizes will open against any pressure up to 125 lbs.
2. No internal packing! Disc renewable easily and economically. Hot or cold liquid at high or low pressure handled without hunting or water hammer.
3. Sizes 3" and smaller are all-brass valves. Larger sizes have semi-steel body, bronze bonnet, piston and trim. Globe or angle body patterns. Send for Bulletin 101-B.

Davis
DAVIS REGULATOR COMPANY

2531 South Washtenaw • Chicago 8, Illinois

▲ For more details circle NED-789 G7 on enclosed inquiry slip ▲

BLACKMER rotary pumps



● *for sustained efficiency*
● *low maintenance*

"SELF-ADJUSTING for WEAR" VANE CONSTRUCTION assures sustained efficiency. Vanes can be replaced economically to restore "new pump" efficiency.

REPLACEABLE LINERS — Liner replacement is simple and eliminates the need for replacing the entire pump.

WIDE RANGE of APPLICATIONS — Blackmer Pumps are handling hundreds of liquids and semi-solids successfully. Power units for electric, gasoline, or diesel power, with capacities from 10 to 1500 GPM, for liquid pressures up to 125 psi, temperatures to 450° F.

"liquid materials handling"® equipment
BLACKMER

Industrial, Hand and Truck Pumps, Strainers, Pressure Control Valves
BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICH.
DIVISION SALES OFFICES — NEW YORK • ATLANTA • CHICAGO
GRAND RAPIDS • DALLAS • WASHINGTON • SAN FRANCISCO
See Yellow pages for your local sales representative

▲ For more details circle NED-790 G7 on enclosed inquiry slip ▲

New Processes & Materials

ALUMINIZED ASBESTOS CLOTH permits work at over 2500° F

By reflecting over 90 per cent of the radiant heat to which it is exposed, Kamklad aluminized asbestos cloth permits personnel to safely work in areas where temperatures exceed 2500° F. Photo shows worker before open door of an open hearth furnace operating at 2900° F. Cloth can also be exposed to direct flame without damage. Its smooth foil surface resists water and oils. Besides protective garments, cloth can be used for fire protective curtains and fire baffles. Made by **Keasbey & Mattison Co.**, Maple St., Ambler, Pa.

▲ For more details circle NED-792 G7 on enclosed inquiry slip ▲

CORROSION INHIBITOR for cooling tower systems

Nalco 360 water treatment formula for control of corrosion in cooling tower systems is basically a chromate type material to which other inhibitors, each of which exerts a synergistic effect on the others, have been added. Product is effective over a wide range of pH conditions. It is produced in 3-in. diameter briquettes weighing about 1 lb each. Inhibitor is dissolved by passing cooling water through a bypass feeder in which they are placed. Briquettes can also be dissolved in a wire basket suspended in the tower basin. Inhibitor should not be used to treat potable water. Made by **National Aluminate Corp.**, 6211 W. 66th Pl., Chicago 38, Ill.

▲ For more details circle NED-793 G7 on enclosed inquiry slip ▲

FLOOR FINISH heavy duty, high gloss type

Acrylic and vinyl latices are used in Brulintread heavy duty waxless floor finish which dries to a high gloss without buffing. The resin type finish contains no solvents, is nonflammable and can be safely used on all composition tile, terrazzo and sealed wood floors. It has water, scuff and wear resistance and exceeds UL slip resistance requirements. Made by **Brulin & Co.**, Dept. NED, 2939-45 Columbia Ave., Indianapolis 7, Ind.

▲ For more details circle NED-794 G7 on enclosed inquiry slip ▲

DEGREASER! machinery shampoo

SPRAY OR BRUSH ON . . .

Takes cling out of oil and grease . . . emulsifies it . . . so that all dirt may be hosed off. Launders engines, lathes, machinery, faster, more completely than steam cleaning. Self scouring action brings out factory new appearance . . . provides accurate visual inspection. Where work will not withstand the use of water for rinsing, we can recommend suitable GUNK replacement. (GUNK is also an excellent paint brush cleaner.) Shipped in concentrated form . . . 55 gal. drum makes 500 gals. heavy-duty Degreaser! Genuine GUNK is sold in bulk sizes at better industrial wholesalers everywhere!

IMMEDIATE DELIVERY 1 PINT OR A TANK CAR
CURRAN CORP. Mfg. Chemists LAWRENCE, MASS.

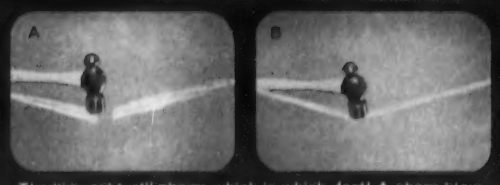
(CHICAGO PLANT) GUNK CHICAGO CO. • CHICAGO 38, ILL. • (LICENSEE)

▲ For more details circle NED-795 G7 on enclosed inquiry slip ▲

Which

one is cellophane tape?
Which is
New MYSTIK KYLON®?

Side by side it's almost impossible to tell Kylon—the new miracle plastic film tape—from cellophane. Both are crystal clear and look exactly alike.



The "impact test" shows which is which, fast! A sharp blow snaps cellophane tape (a). But new Kylon "soaks up" shock and abuse (b), recovers after repeated impact. Nine times greater tear strength, too. Makes Kylon best for packaging and every use.

KYLON®...
the new name for transparent tape

Higher impact resistance and greater packaging strength is just one of Kylon's 5 important advantages over cellophane. Kylon is waterproof and moistureproof. It's ageproof. It has superior holding power and comformability. It's best for printing. Yet it costs no more than cellophane. Make the comparison yourself. Mail coupon for free sample.

MYSTIK INDUSTRIAL TAPES

MT
NED-77 MYSTIK ADHESIVE PRODUCTS, Inc.
2835 North Kildare Avenue, Chicago 39, Illinois

Please send sample and full information about new Mystik Kylon . . . successor to cellophane tape.

Name
Position
Company
Address
City Zone State

▲ For more details circle NED-796 G7 on enclosed inquiry slip ▲

Bata cuts mold cleaning time in half with Pangborn Hydro-Finish

Bata Shoe Co., Belcamp, Md., used to clean shoe molds by pickling. For a better cleaning job, Bata replaced this process a year ago with Pangborn Hydro-Finish. Today this machine gives Bata top quality cleaning, does the job *in half the time* required by pickling and has required "no maintenance whatsoever." Also, acid disposal problems have been eliminated.

Says Mr. Albert Kotras, Research, "We thought it was sales talk but the Hydro-Finish has lived up to every claim the Pangborn representative made." Convinced by the performance of its Hydro-Finish machine, Bata management now plans to order a second one.

Today, through new design and use of air jet sluriators, Pangborn Hydro-Finish costs less originally, costs less to maintain and gives you easier handling and added efficiency. Write for Bulletin 1403 to PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md. *Mfrs. of Blast Cleaning and Dust Control Equipment.*

USE PANGBORN HYDRO-FINISH FOR:
Deburring • Surface finishing • Finishing threaded sections • Improving cutting tool life • Maintaining dies and molds • Removing grinding lines • Removing heat treat scale • Preparing surfaces for coatings, platings, etc.

Pangborn
BLAST CLEANS CHEAPER

▲ For more details circle NED-791 G7 on enclosed inquiry slip ▲

MAN PROTECTING A BIG INVESTMENT!

The man above is making a fine, positive adjustment on an EMPCO Leveling Jack, setting the machine level . . . making certain it delivers precision performance with minimum downtime . . . minimum cost! EMPCO Jacks provide a solid, smoothly adjustable foundation for machine tools, large surface plates, automation lines, tool room and production equipment of all types.

Used together with VI-SORB Mounting Pads, EMPCO Jacks control internal and transmitted vibrations. They reduce noise, retard creepage and frequently eliminate the need for anchor bolts.

Jacks available in six styles, 25 models. Pads cut to fit. Write us about your machine installation problems.

Send Today For Descriptive Bulletin No. 100.
The Enterprise Machine Parts Corporation
2727 Jerome Avenue • Detroit 12, Michigan

EMPCO LEVELING JACKS

▲ For more details circle NED-797 G7 on enclosed inquiry slip ▲

the original DOUBLE-ACTION

Go-Jo

REG. U. S. PAT. OFFICE

HAND CLEANER

REMOVES GREASE AND GRIME—all Stubborn Soil IN 1/2 THE TIME ...easier ...faster ...safer

Cuts HAND CLEANING COSTS 50% AND MORE saves time saves money

The First and Only Fully Automatic "ONE SHOT" DISPENSER

Amazing double-action cleaner—may be used with or without water—provides the best in fast action, removal of grease, grime, paint, ink, asphalt—all stubborn soil. No harsh abrasion—guards against Dermatitis—soothing, safe protection for the skin.

Proven highest time-saving efficiency with "one-shot" dispenser—gives just the right amount every time—convenient replaceable throw-away can. It's time you investigated Go-Jo.

GET DETAILS

Send for information to Dept. N.
GOJER, INC., Box 991, Akron, Ohio

Name_____ Title_____
Company_____
Address_____
City_____ State_____

America's Largest Manufacturer of Creme Type Hand Cleaners

▲ For more details circle NED-798 G7 on enclosed inquiry slip ▲

New Literature & Catalogs

Car Pullers

Hewitt-Robins, Inc.—32-page booklet J-11 describes various types of car pullers for moving freight cars, barges, scrap buggies, furnace cars and many types of industrial transfer cars. Full specifications on single and double drum, one and two-way pullers with motor outputs from 2 to 50 hp are tabulated. Track layouts and selection data are covered as well.

▲ For more details circle NED-799 G7 on enclosed inquiry slip ▲

Hydraulic Power Units

Oil-Dyne, Inc.—52-page catalog contains complete technical data on 2240 different types and models of Oil-Dyne pumps, single and duplex pressure switches, hydraulic cylinders and full line of accessories. Hydraulic units, which measure only 8 to 10 in. high, are available for pressures to 3000 psi, with peaks up to 5000 psi.

▲ For more details circle NED-800 G7 on enclosed inquiry slip ▲

Specialty Motors, Fans & Blowers

Ashland Electric Products, Inc.—Full details, including physical specifications and electrical characteristics of line of synchronous torque, induction and gear motors, centrifugal blowers and axial fans are given in 14-page catalog 83. Both standard and custom models are available. Units are used in the recorder, electronics and instrumentation industries.

▲ For more details circle NED-801 G7 on enclosed inquiry slip ▲

Miniature Electrical Connectors

Deutsch Co.—Miniature hermetic, quick-disconnect, push-pull, rack and panel, and Edgelite panel types comprise the line of electrical connectors described in 24-page catalog. Charts supply significant dimensions, including weights, for the complete line of miniatures. Mating combination, special numbering and mounting dimensions are also given.

▲ For more details circle NED-802 G7 on enclosed inquiry slip ▲

Environmental Temperature Cabinets

Webber Corp.—Six different models of standard subzero industrial freezers are illustrated in 4-page folder 2-57. Units are mechanically operated from −225 to 350° F and come in sizes from 1 to 45 cu ft. Standard and optional features, as well as model numbers, temperature ranges, capacities and dimensions are itemized.

▲ For more details circle NED-803 G7 on enclosed inquiry slip ▲

Magnetic Cores

General Ceramics Corp.—Magnetic properties of Ferramic 0-2, Q and H ferrite materials are described in three catalog sheets. Materials are used as component parts in radio and tv sets, computers, automatic controls and related electronic equipment. Certain information is in tables and graphs.

▲ For more details circle NED-804 G7 on enclosed inquiry slip ▲

Resistance Welding & Mass Production

Taylor-Winfield Corp.—Photos and brief descriptions of more than 300 different items produced by spot, projection, flash-butt, upset-butt and seam welding and electro forging are found in 24-page bulletin SP-18. Welded metals are nonferrous, stainless steel and steel. Company facilities for testing and experimenting on any welding job are outlined.

▲ For more details circle NED-805 G7 on enclosed inquiry slip ▲

Pneumatic Mufflers Control Noise

Allied Witan Co.—Charts included in 8-page illustrated brochure "Noise Control" show performance data for pneumatic mufflers which eliminate exhaust noises of air operated equipment. Noise levels, air flow and attenuation levels at various air line pressures are also covered. Prices and muffler specifications are included.

▲ For more details circle NED-806 G7 on enclosed inquiry slip ▲

Beryllium Copper Components

H. Braun Tool & Instrument Co.—Metal stampings of beryllium copper for electronic and aircraft industries are illustrated in 12-page catalog. Physical, electrical, chemical, formability, tolerance and stress property charts are included.

▲ For more details circle NED-807 G7 on enclosed inquiry slip ▲

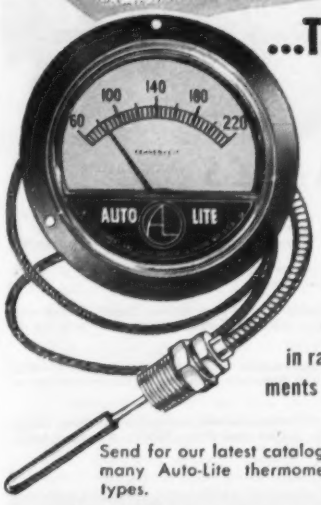
Electric Clips

Mueller Electric Co.—Alligator and miniature test clips are among many types of electric clips described and illustrated in 8-page 1957 catalog. Specifications for a wide variety of sizes and their insulators are included.

▲ For more details circle NED-808 G7 on enclosed inquiry slip ▲

AUTO-LITE

...TEMPERATURE INDICATION



Original equipment manufacturers may choose from a complete line of Auto-Lite dial thermometer types, in ranges to meet the requirements of specific applications.

Send for our latest catalog describing the many Auto-Lite thermometer styles and types.

THE ELECTRIC AUTO-LITE COMPANY
Instrument and Gauge Division
Toledo 1, Ohio
New York • Chicago • Sarnia, Ontario

TEMPERATURE INDICATORS & RECORDERS

▲ For more details circle NED-809 G7 on enclosed inquiry slip ▲

RACKS

• that SAVE HANDLING COST
• PROTECT MERCHANDISE
• MAKE STORAGE SPACE GO FURTHER

BUILT FOR LESS (we prove it)

Write for information on how the NU-RAIL famous offset design fitting slashes erection time—allows use of your stock pipe for construction.

THE HOLLAENDER MANUFACTURING CO.
3839 Spring Grove Avenue
Cincinnati 23, Ohio

▲ For more details circle NED-810 G7 on enclosed inquiry slip ▲

FREE!

If heat processing is your job—don't miss this "idea-packed" booklet

Never before have so many sound basic ideas on heat processing been available under one cover.

Written by engineering experts at Michigan Oven Company, it offers practical suggestions on what to look for in an oven regardless of your application.

Why not send for "The Handbook of Oven Facts"? It may be the most important decision you make today! Or, if you have a specific application, a MOCO representative will be pleased to call.

MICHIGAN OVEN COMPANY
419 Brainard, Detroit 1, Michigan

▲ For more details circle NED-811 G7 on enclosed inquiry slip ▲

IT CAN SAVE YOU $$$$$$$

— by Slashing Metal-Cutting Costs! . . . .

BUT IT'S FREE!

Better Write for the

HKP PORTER CUTTER-Catalog

In manufacturing plants everywhere these powerful, efficient cutters are saving money in production, maintenance and materials handling operations. Manufacturers are finding out that a PORTER METAL CUTTER is capable of exerting 20,000 pounds of cutting pressure — sufficient to cut ⅝" diameter steel rod, at a labor cost of 1/14th of a cent, versus 7 cents cost with other tools. Your jobs may be tough, but, perhaps the PORTER CUTTER catalog can come up with a tool that's tougher — and the answer to your problem. At any rate, it will cost you nothing to

WRITE FOR THE PORTER CATALOG — TODAY!

It shows 108 different metal cutters — that cover just about every cutting job we know of, including BOLTS, RODS, SCREWS, RIVETS, SOFT, MEDIUM AND HARD METALS, WIRE, STEEL STRAPPING, CABLE, CHAIN and other metals.

Ask your Industrial Distributor or write

H. K. PORTER, Inc. Somerville 43, Mass.

For more details circle NED-812 G7 on enclosed inquiry slip

it's NEW!
it's PNEUMATIC!
it's THE FIRST OF ITS KIND . . .

328-B

Brainard's New Pneumatic Stretcher and Cutter for Heavy Duty Strapping . . . offers these *Advantages*

- ★ Only Pneumatic Heavy Duty Strapping tool of its kind.
- ★ Specially designed for heavy duty strapping on pallets, skids, car bracing, and large bundles.
- ★ Pneumatic power insures uniform tension on each band.
- ★ Pneumatic power does the work. Eliminates operator fatigue.
- ★ Rugged construction assures minimum down time for tool maintenance.
- ★ Tool is light weight and portable.
- ★ Because of less operator fatigue, tool is more productive during work shift.
- ★ Operates on any flat stock or flat package.

Brainard Steel Strapping

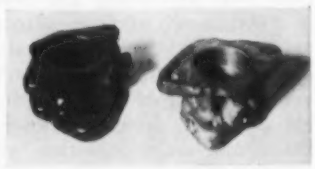
SHARONSTEEL

Brainard Steel Division, Sharon Steel Corporation
Griswold Street, Warren, Ohio

For more details circle NED-813 G7 on enclosed inquiry slip

New Processes & Materials

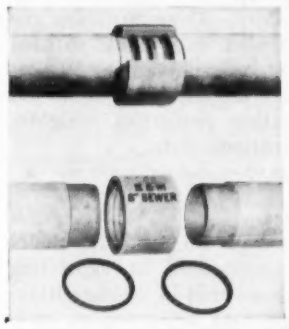
PROTECTIVE COATING
strip-off type for metal parts



Heating metal parts of all types and dipping them in a strip-off type plastisol coating provides them with protection against rust, corrosion, dirt or damage. The controllable thickness cushion provided is suited for precision instruments and parts with sharp edges. Coating is unaffected by cold or hot weather, mold, mildew, salt, air or water. It has high thermal and electrical insulating qualities and resists most acids, alkalis and solvents. Made by **Auburn Button Works, Inc.,** Chemical Processing Div., Dept. AB-10, Auburn, N. Y.

For more details circle NED-814 G7 on enclosed inquiry slip

SEWER PIPE
utilizes fluid-tight coupling



Strong, durable, light in weight and easily handled, K & M asbestos-cement sewer pipe is suited for economical nonpressure sewer systems. It is quickly installed by unskilled labor. Fluid-Tite coupling assures infiltration-proof joints and makes possible rapid assembly. Pipe and fittings have a smooth bore and are offered in diameters from 6 to 12 in. Branch connections are easily made by cutting a hole in the existing line. Made by **Keasbey & Mattison Co.,** Maple St., Ambler, Pa.

For more details circle NED-815 G7 on enclosed inquiry slip

DIAMOND COMPOUND
packaged in throwaway applicator

Amount of Super-Lap diamond compound dispensed is exactly controlled by pressure seal plunger of this throwaway applicator. Compound can be applied directly to work and is protected from contamination by an air seal cap. Applicator package contains 5 grams and is color coded for grade identification. Also available are 5 and 18-gram glass cartridges. Made by **Acme Scientific Co.,** 1457 W. Randolph St., Chicago 7, Ill.

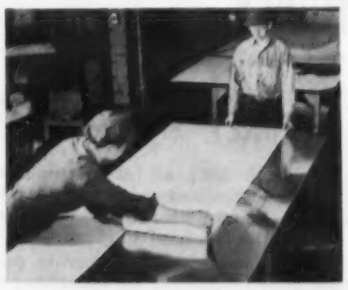
For more details circle NED-816 G7 on enclosed inquiry slip

PLASTIC PROTECTOR
covers reports, photos, documents

Thin, strong, lightweight Mylar polyester transparent film is used in MY-11 sheet protectors for covering presentations, displays, reports, photos and other papers and documents. The 8½ x 11-in. size fits standard three-ring binders. Plastic can withstand a pull of 60 lb without tearing at the holes and will not rip or crack at the edges. Fifty-five double-faced sheets will fit in a 1-in. binder. Made by **Joshua Meier Co.,** 152 W. 23rd St., New York 11, N. Y.

For more details circle NED-817 G7 on enclosed inquiry slip

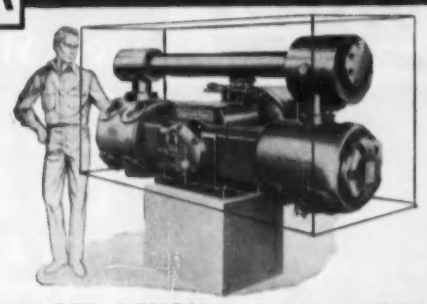
PROTECTIVE MASKING
for various sheet materials



Five grades of Protecto - Mask pressure-sensitive masking material are available for protection of a wide variety of sheet materials. Standard grade is used for sheathing aluminum, stainless steel, glass and sheet plastics. Also available are black weather resistant grade for architectural products, fabricating grade which can be drilled or cut and a heavy duty grade, suited for sand-blast masking. Made by **Mystik Adhesive Products, Inc.,** 2657 N. Kildare Ave., Chicago 39, Ill.

For more details circle NED-818 G7 on enclosed inquiry slip

AIR COMPRESSORS



PACKAGED DESIGN makes Ingersoll-Rand PHE heavy-duty compressor easy to install, maintain and relocate. Shipped fully assembled and ready to run, units require only a minimum of piping connections, foundation and floor space. Opposed-cylinder, balanced design makes them particularly well suited wherever floor or ground conditions require a well-balanced machine.

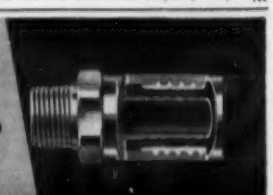
Newly designed cylinders and the latest I-R Channel Valves make this an efficent and dependable compressor on any service. Available single or multi-stage, 75 and 100 hp. For a full description, send for a copy of Form 3155.

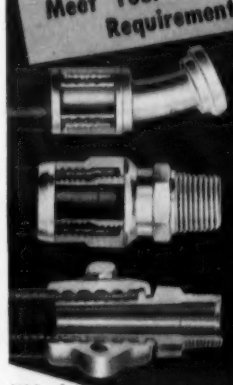
Ingersoll-Rand Dept. PP
1-602 11 Broadway, New York 4, N.Y.

OVER 1000 COMPRESSOR TYPES & SIZES...FROM 1/4 TO 6000 HORSEPOWER

For more details circle NED-819 G7 on enclosed inquiry slip

This Inside Story— why ANCHOR® HOSE ASSEMBLIES Meet Your Most Rigid Requirements





The "inside story" refers first to the cross-sections shown from which the advantages of Anchor Hydraulic Hose Assemblies can be learned.

But, beyond these obvious benefits, we refer to the intangible advantages evolving from the years of experience in production of hydraulic hose assemblies—advantages that show up only in bonus months of dependable service.

Anchor Hydraulic Hose Assemblies are made for high, medium and low pressure service and for use on virtually any equipment using a hydraulic system. Working pressures range from 100 PSI (2" I.D. Spiral Wire Hose) to 7000 PSI (3/16" I.D. 3 Wire Braid Hose) and a variety of coupling styles are available.

Write for Anchor Catalog No. 575 with specifications on Anchor's very complete line of hose assemblies.

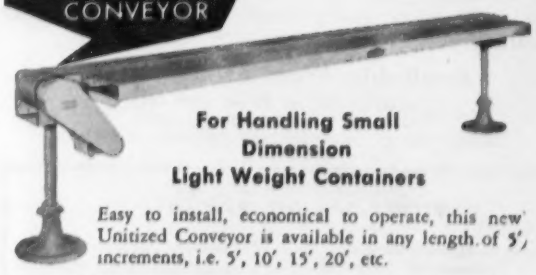
ANCHOR COUPLING CO. INC.

319 North Fourth Street, Libertyville, Illinois
Branch Offices: Dallas, Tex., Plymouth, Mich.

For more details circle NED-820 G7 on enclosed inquiry slip

NEW! NARROW BELT UNITIZED CONVEYOR

BELT WIDTHS OF 1" TO 6"



For Handling Small Dimension Light Weight Containers

Easy to install, economical to operate, this new Unitized Conveyor is available in any length of 5', increments, i.e. 5', 10', 15', 20', etc.

CONSTRUCTED of STANDARD PARTS

making it easy to lengthen the conveyor if increased production makes this necessary. Obsoleteness of equipment is eliminated. Ideally suited for the pharmaceutical, cosmetic, aerosol packaging, drug and chemical, plastics, food products and baking industries.

FREE! MAIL THIS COUPON FOR FULL DETAILS

ISLAND EQUIPMENT CORP. NED 7
27-01 Bridge Plaza North
Long Island City 1, N. Y.

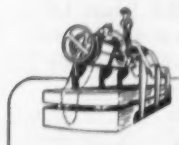
Please send particulars on the Unitized Narrow Belt Conveyors.

COMPANY.....
BY.....
ADDRESS.....
CITY.....STATE.....

For more details circle NED-821 G7 on enclosed inquiry slip

1 man handles Sheet Steel Faster, Easier with a C-F LIFTER

C-F Lifters, under one man operation, pick up, carry and unload more sheet steel tonnage per hour than any other method – and at lower cost per ton. Wide carrying angles hold sheets securely – won't damage high grade sheets; tong action insures safe carrying; fast opening and closing adjustments of Lifter jaws permit shifting from one size pack to another in seconds. C-F Lifters are made in standard or semi-special models to handle from 2 to 60 tons.

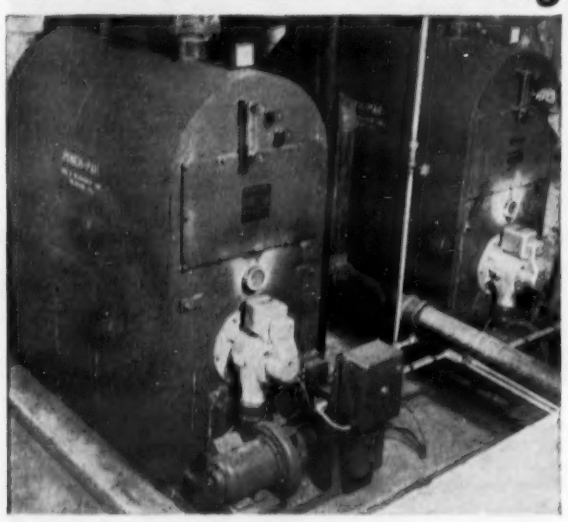


Write for Bulletin SL-30 for specific examples of C-F Lifter operation and economy.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

For more details circle NED-822 G7 on enclosed inquiry slip

Today's best boiler buy for LOW-COST Heating



O&S

POWER-PAK®

Packaged Automatic Boiler

Ideal for apartments • office buildings • churches • schools • markets • stores • motels • camps • clubs • restaurants • bakeries • garages • service stations • greenhouses • launderettes • warehouses • industrial plants • other low-pressure steam or hot-water heating needs

Available From Stock NOW!

3 SIZES: 15, 20, 25 HP WITH OIL, GAS OR COMBINATION BURNERS
APPROVED BY UNDERWRITERS' LABORATORIES, INC.

MONEY-SAVING ADVANTAGES

- completely factory-assembled
- space-saving compactness
- time-saving installation
- factory fire-tested
- factory-insulated steel boiler
- fast steaming
- industrially-rugged burner
- 5 sq ft of heating surface per hp
- automatic operating and safety controls
- forced draft—no chimney needed
- clean, quiet operation
- easy over-all accessibility
- one-source responsibility for entire unit
- nation-wide factory-schooled service

Get full information now. Send for Bulletin 1233.

ORR & SEMBOWER, INC.
READING, PA.
Builders of Dependable Boilers Since 1885

For more details circle NED-823 G7 on enclosed inquiry slip

New Literature & Catalogs

Facts on Industrial Ovens

Michigan Oven Co.—The basic concepts of industrial heat processing and heat control are explained in "Handbook of Oven Facts" which includes common formulas used in calculating heat and oven requirements. Guidance is offered for solving heat processing problems. Such subjects as fuel, oven classification, design, exhaust requirements, temperatures and oven selection are discussed. Ask for bulletin 555.

For more details circle NED-824 G7 on enclosed inquiry slip

Metal Cases & Boxes

Zero Mfg. Co.—62-page illustrated catalog lists details of more than 1400 deep-drawn and fabricated metal instrument cases, boxes and military cases. By means of secondary processings, stock sizes can be adapted to meet special environmental and other requirements. Plant facilities for sheet metal fabricating are described.

For more details circle NED-825 G7 on enclosed inquiry slip

Stainless Steel Sheet & Strip

Allegheny Ludlum Steel Corp.—Over 20 tables are contained in 32-page illustrated data book entitled "Stainless Steel Sheet and Strip" to give complete information on this material. Included are tables on corrosion resistance, fabrication properties, weights, available grades and applications data.

For more details circle NED-826 G7 on enclosed inquiry slip

Packaged Air Conditioners

American-Standard, American Blower Div.—Self-contained packaged air conditioners in capacities ranging from 3 to 20 hp are covered in 20-page illustrated bulletin 6125. Design data are given on such components as cooling coils, fan, motor, compressor and controls. Capacity curves and performance tables aid in selection and application of proper unit for commercial or industrial use.

For more details circle NED-827 G7 on enclosed inquiry slip

Electrical Connectors

Cannon Electric Co.—Battery, power and heavy duty connectors for industrial and processing applications are described in 32-page catalog GB6. Dimensions and capacities of a complete line of durable connectors for electric power service are shown.

For more details circle NED-828 G7 on enclosed inquiry slip

Precision Balls

Hartford Steel Ball Co.—Aluminum, brass and bronze, carbon steel, chrome alloy steel, glass, hollow, K-Monel, plastic, stainless steel and other balls are detailed in illustrated catalog "Precision Balls." Information given includes material characteristics, analysis, mechanical properties, temperature characteristics, corrosion resistance factors, machinability, finish, hardness, accuracy, size, weights and quantities per pound.

For more details circle NED-829 G7 on enclosed inquiry slip

Portable SURFACE HARDNESS TESTER

only ¾ in. in diameter, less than 7 in. in length, weighs 7 ounces, gives readings in Rockwell and Brinell

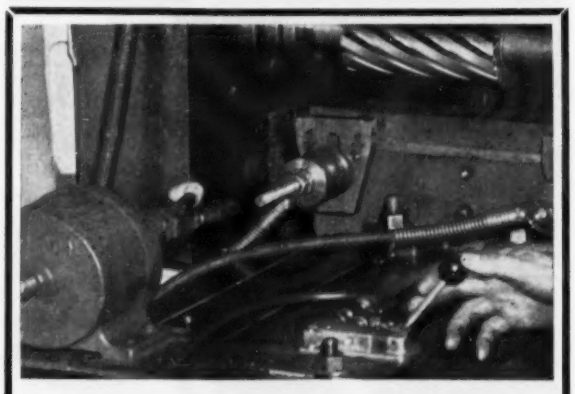
This instrument measures surface hardness by height of rebound of a steel hammer while held in vertical position. Due to the locking of the steel hammer at maximum rebound, a direct reading is possible, eliminating any guesswork or estimating.

The tester is intended for shop use, reads Brinell 3000-kg. and Rockwell C scales up to 67. It is designated as Model ST-5. A movable scale makes calibration easy by checking against any known hardness. Accessory equipment includes carrying case, test blocks and a test stand to hold parts weighing less than 15 lb. or with irregular surfaces.

Ask for bulletin "Peabody Hardness Tester"

Mechanical Devices, Inc.
10631 Harper Ave., Detroit 13, Mich.
Additional distributorships available

For more details circle NED-831 G7 on enclosed inquiry slip



IBM AUTOMATES WITH POWRLOCK!

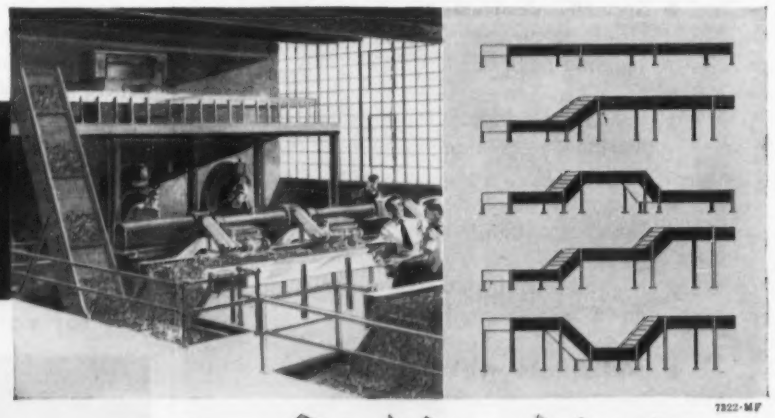
In the International Business Machines Corp. Endicott, N. Y. plant, PowRlock air hydraulic setup clamps have been used to automate this milling fixture. A touch of the control now opens and closes the same fixture which previously was tightened and loosened by using a socket wrench on two manual clamps. The results are much faster loading, less operator fatigue, and elimination of waste labor. PowRlock setup clamps are the first step to inexpensive automation. They install easily on most existing fixtures, lock instantly at 1 to 16 different locations, and completely eliminate manual clamping. Find out how they can make men and machines more productive in your plant!

Attach this ad to your letterhead for free demonstration or literature!

WILTON TOOL
MFG. CO., INC.
SCHILLER PARK, ILLINOIS
NED-7
Sold by Leading Distributors the World Over

For more details circle NED-832 G7 on enclosed inquiry slip

MAY-FRAN
CONVEYOR STANDARDIZATION



7822-MF

SAVES YOU MONEY... NOW... AND IN THE FUTURE!

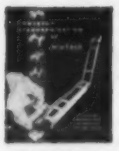
Here is a conveyor program designed for the unusual. NOW . . . you can have a customized conveyor today to meet production needs . . . and with modification, that same conveyor will meet the needs of tomorrow.

The May-Fran conveyor standardization program provides the standard components that can be assembled to form a special or standard conveyor. These same components can be re-arranged at any time to solve production problems in the future.

In addition, standard components mass produced mean conveyor economy right from the beginning.

Here is a conveyor program of standardization program that saves you money now . . . and in the future!

Write today for your copy of Bulletin MF-200



MAY-FRAN ENGINEERING, INC.
1711 Clarkstone Rd., Cleveland 12, Ohio

For more details circle NED-830 G7 on enclosed inquiry slip

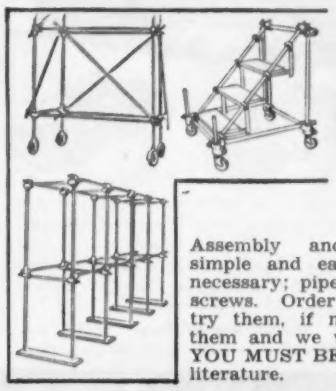
MAKE YOUR OWN

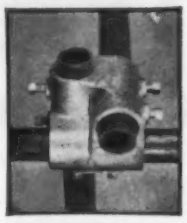
Storage & Pallet Racks . . . Adjustable & Frame Scaffolds . . . Portable Docks . . . Rolling Steps . . . Rolling & Stacking Pallets . . . Shelter & Work Bench Frames, etc.

with STRONG, MALLEABLE, TOUGH

AMIDON FITTINGS

(and standard 1-inch pipe)





Assembly and dismantling is simple and easy. No threading necessary; pipe is secured by set-screws. Order 25 Fittings direct, try them, if not satisfied return them and we will buy pipe used. YOU MUST BE SATISFIED. Free literature.

AMIDON ENGINEERING CO.
ELYRIA 20, OHIO

For more details circle NED-833 G7 on enclosed inquiry slip

Type WS HOBBS-ALQUIST

The First and Only WINDER of Its Kind!

Illustration shows only driving mechanism.
Winding stand, specially engineered for your requirements, can also be furnished.

For use with take-ups behind film extruders, where low and constant tensions at low speeds are required.

If you wish to protect YOUR extruded film from breakage and distortion; if you wish to do it by a comparatively simple, positive and economical method, here's the machine you need.

Never before has a winder like this been available for extruded use . . . although new, the WS Hobbs-Alquist unit has been fully tested.

You can eliminate distortion of tender, delicate materials when winding after extruding . . . you can maintain constant tension at ridiculously low speeds. Variable speeds can be manually adjusted for changing widths.

So . . . you get constant tension at lower speeds than ever before, variable speed control and torque control all in one winder!

The operating speed of the WS Winder is *automatically adjusted downward*, as the roll builds up and the torque increases. Thus a low and constant tension on the extruded film is maintained and breakage and distortion are minimized or eliminated.

Take the first step NOW toward protecting your extruded film. Send for our "Type WS Data Sheet".

HOBBS MANUFACTURING CO.
EST. 1888
41G Salisbury Street, Worcester, Mass.

Branch Offices & Representatives in Irvington, N. J., Chicago, Cleveland, Greenville, S. C. and Toronto, Canada

WINDERS • SHEARS (Hand & Automatic) • DIE PRESSES SLITTERS • CORNER CUTTERS

For more details circle NED-834 G7 on enclosed inquiry slip

New Processes & Materials

PRECISION CASTINGS KIT
contains samples of various parts

Materials and workmanship available in small precision castings and sintered metal parts are shown in samples contained in this kit. Techniques utilized in their production are said to eliminate or substantially reduce finishing and machining operations. Samples show casting holes, recesses and projections, and how parts have been surface ground and finish machined to meet specifications. Available free from **Sparta Foundry Co.**, Dept. NED, Sparta, Mich.

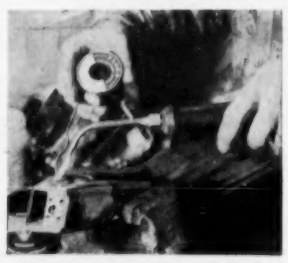
For more details circle NED-835 G7 on enclosed inquiry slip

SYNTHETIC RUBBER
for gasoline, LP-gas, fuel oil uses

UL approval for use with gasoline, kerosene, LP-gas and fuel oils No. 1 through 6 has been obtained for this single synthetic rubber packing and O-ring compound. The rubber is suitable for fuel oils at temperatures from −40 to 250° F and for gasoline, kerosene and LP-gas at temperatures from −40 to 125° F. Developed by **E. F. Houghton & Co.**, Dept. NED, 303 W. Lehigh Ave., Philadelphia 33, Pa.

For more details circle NED-836 G7 on enclosed inquiry slip

CORROSION RESISTANT SOLDER
has an affinity for all metals



Ability to withstand a 20 per cent salt spray bath for 800 hours without deteriorating is a feature of Farco solder, which has an affinity for all metals, including aluminum. It has a melting point 27° F higher than 50-50 tin-lead solder, is soft enough to work with a machinist's scraper, and is said to have double the strength of conventional solder. It also acts as an electrolytic buffer between dissimilar metals. Solder makes a good base for plating, shows no line of demarcation between it and hot dipped galvanizing, and makes a homogeneous coat where galvanizing has been destroyed by welding. Made by **Farrelloy Co.**, 1246 N. 26th St., Philadelphia 21, Pa.

For more details circle NED-837 G7 on enclosed inquiry slip

LIQUID DETERGENT
for use in steam cleaning equipment

Solution-lifting steam guns and self-generating steam cleaning equipment can use Oakite LSD, a liquid detergent. It simplifies preparation of steam cleaning solutions and minimizes clogging of coils in light to medium-heavy duty cleaning operations. Effective soil removal is provided at concentrations of 1 to 2 oz per gallon of water as delivered by the gun. It can be used on steel, brass, magnesium and painted surfaces. Solution has a pH of 12 and produces no offensive fumes. Made by **Oakite Products, Inc.**, 132G Rector St., New York 6, N. Y.

For more details circle NED-838 G7 on enclosed inquiry slip

PLASTIC LAMINATE
for fume hoods, ducts and stacks

Wide range of chemicals, including acids and alkalies, are withstood by Rigiply, a glass fiber reinforced laminate of thermosetting resins. The two-ply lightweight material can be fabricated into fume exhaust hoods, ducts, stacks, fume scrubbers and tank covers for pickling, plating and chemical plant operations up to 250° F. Made by **Heil Process Equipment Corp.**, Dept. CE, 12902 Elmwood Ave., Cleveland 11, O.

For more details circle NED-839 G7 on enclosed inquiry slip

SMALL STEAM TRAP
. . . but large capacity!

New Design
New Operating Principle

Small as a tee fitting! That's the Sarco TD . . . all sizes ⅜ to 1"!

But don't let the small size fool you! ½" Sarco TD, for example, has capacity of 1280 lbs/hr, 150 psi, saturated steam temperature.

Capacity is determined, *not* by a bulky body, but by the effective orifice, valve action, pressure drop, and condensate temperature.

Few of many advantages

Same trap and large capacity seat for all pressures, 10 to 600 psi . . . light or heavy loads. Self-adjusting. Has no valve mechanism. Only one moving part.

Ask for 60-day trial trap and strainer. No cost or obligation. Buy *only* if satisfied. Specify size, use. Sarco Co., Inc., Empire State Bldg., N. Y. C. 2226-F

SARCO Thermo-Dynamic STEAM TRAP

THE MODERN TRAP THAT IS MAKING STEAM TRAPPING HISTORY!

For more details circle NED-840 G7 on enclosed inquiry slip

Free Booklet On Self-Lubricating Bearings

Complete details on over 400 sizes and types of Johnson Ledaloyl stock bearings are given in one compact brochure. Equally valuable to machinery designers, production men, and repairmen, the brochure describes the self-lubricating bearings, explains their advantages and lists standard bearings available. Information is also given on the custom-made Ledaloyl bearings which Johnson will make to any specifications. For your free copy of JBL-5, write to Johnson Bronze Company, 580 S. Mill Street, New Castle, Pa.

JOHNSON Bearings **Johnson Bronze**

For more details circle NED-841 G7 on enclosed inquiry slip

Verson Model 1062 Press Brake, $2,630.00*, *available from stock*

• It doesn't take weeks and months to have this press brake delivered. Standard Verson Model 1062 Press Brakes are available from stock. Just pick up your phone and order.

Famous Verson quality and design are built into this press brake and its smaller companion, the 16-48. They provide an economical answer to a wide variety of jobs in all shops.

Model 1062, 16 ga. by 78" capacity, is priced at $2,630.00*; Model 16-48, 16 ga. by 48" capacity, is $1,600.00*. Order yours today. *Both are available from stock!*

*Prices, F.O.B. Chicago, less dies; subject to change without notice.

Verson **VERSON ALLSTEEL PRESS CO.**

9329 S. Kenwood Ave. • Chicago 19, Ill.
8300 S. Central Expressway • Dallas, Texas

For more details circle NED-842 G7 on enclosed inquiry slip

TOOL GRINDERS FOR EVERY PURPOSE

XLO
EX-CELL-O FOR PRECISION

Ex-Cell-O offers a complete line of double-end tool grinders for every shop, every type of tool. All are excellent for wet or dry grinding. Tables adjust toward the grinding wheels to allow for wear. Many other features are shown in these . . .

4 FREE BROCHURES

Written to answer specific grinding problems, these folders show comparative specifications, extra equipment, etc. Send for yours today!

EX-CELL-O CORPORATION DETROIT 32, MICHIGAN

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THIS is for you

if you load boxcars or trucks with bagged products...

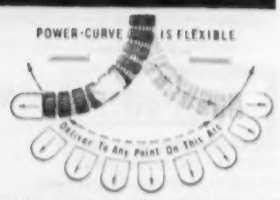
Because you can eliminate hand trucking and convey all the way from packer or storage IN ONE STEP into the very end of the car, this Power-Curve loader will cut your loading costs ⅓ or more and increase your plant's handling capacity.

The fully powered conveying surface swings freely to left or right, raises or lowers, while operating. Self-propelled, one man directed, into or out of car. Pays for itself in WEEKS, proven in plants loading chemicals, flour, feeds, fertilizer, starch, cement, salt, etc.

WRITE FOR CATALOG, INSTALLATION DIAGRAMS, RECORDS OF SAVINGS, ETC.

POWER-CURVE CONVEYOR CO.
2185 SOUTH JASON STREET • DENVER 23, COLORADO

Loaders, Elevators, Conveyors, Flatteners, Complete Power-Curve Systems



▲ For more details circle NED-848 G7 on enclosed inquiry slip ▲

New Literature & Catalogs

Diaphragm Valves

Hills-McCanna Co.—Features of diaphragm valves for positive closure in corrosive substance, air, water, gas and slurry service are presented in 12-page illustrated catalog 104. Plastic valves and diaphragms for corrosive services are also covered. Chart of diaphragm materials is included, as are valve specifications.

▲ For more details circle NED-849 G7 on enclosed inquiry slip ▲

Extruded Plastics

Jessall Plastics, Inc.—Dimensional tables in bulletin 105 cover tubing and rod made of nylon, cellulose-acetate-butyrate, methacrylate (Lucite or Plexiglas), polyethylene, polystyrene and vinyl available from stock. Finished tubes and rods are offered in coils, reels or straight lengths in natural and artificial colors, special sizes and shapes. Dimensions and weight are given.

▲ For more details circle NED-850 G7 on enclosed inquiry slip ▲

Belt Conveyor Idlers

C. O. Bartlett & Snow Co.—Troughing, flat, self-aligning, rubber disk and return designs of belt conveyor idlers are described in illustrated 8-page bulletin 75. They have 4, 5 or 6-in. diameter rolls and are fitted with Timken or sealed-for-life bearings. Standard sizes and dimensions are covered, and design features are shown.

▲ For more details circle NED-851 G7 on enclosed inquiry slip ▲

Fluid Control Valves

Golden-Anderson Valve Specialty Co.—"Valves for Automation in the Steel Mill" is an illustrated 16-page bulletin which schematically shows various piping and valve arrangements. Included are valves for mill water supply, emergency city connection, liquid level control, spraying on hot strip mills, fire protection, coke quenching and others.

▲ For more details circle NED-852 G7 on enclosed inquiry slip ▲

Tools & Gages

Brown & Sharpe Mfg. Co.—96 pages of illustrated catalog 36M on precision tools and gages contains prices and specifications on the following equipment: bench centers, dial indicators, electronic measuring equipment, ground flat stock, Johansson gage blocks, permanent magnet chucks, precision tools, spur gear testing fixture, surface plates and taper gages.

▲ For more details circle NED-853 G7 on enclosed inquiry slip ▲

Precision Optics

Texas Instruments Inc.—Engineering, design and production facilities for flat, cylindrical, prismatic, spherical and aspherical precision optics for various applications are described and illustrated in 6-page illustrated bulletin 0-104. Two-page bulletin 0-105 describes how company produces infrared optics for use in hypersensitive infrared systems.

▲ For more details circle NED-854 G7 on enclosed inquiry slip ▲

Commercial Glasses & Their Properties

Corning Glass Works, Technical Products Div.—Mechanical, thermal, electrical and chemical properties of selected commercial glasses are discussed at length in 16-page bulletin B-83. Recent additions to property chart are aluminosilicate, low loss iron sealing, radiotron tube and capacitor glasses and fused silica. Viscosity temperature curves and heat transmission data are included.

▲ For more details circle NED-855 G7 on enclosed inquiry slip ▲

Variable Speed Drives

Dayton Rubber Co.—Data on selection of variable speed drives designed to accommodate Dayton Q, R and W cross-section variable speed cog belts are found in 8-page illustrated catalog. Sheaves feature single groove variable flange sheaves. Drives themselves are widely applicable. Five drive tables contain data on speed ratios, driven speed ranges and center distances for motors up to 20 hp.

▲ For more details circle NED-856 G7 on enclosed inquiry slip ▲

Steel Industrial Buildings

Armco Drainage & Metal Products, Inc.—Information on more than 5000 steel building sizes to meet every space need is given in 32-page manual AIA file No. 141. Five different types of buildings available range from shed roof to gable roof types. Simple panel construction, ease of erection, fire and lightning protection, expansion, rearrangement or relocation and freedom of interior treatment are subjects covered.

▲ For more details circle NED-857 G7 on enclosed inquiry slip ▲

Increased Insulation
BETTER CONNECTIONS
JONES BARRIER TERMINAL STRIPS

Leakage path is increased—direct shorts from frayed terminal wires prevented by bakelite barriers placed between terminals. Binder screws and terminals brass, nickel-plated. Insulation, BM 120 molded bakelite. Finest construction. Add much to equipment's effect.

Jones Means Proven Quality

Illustrated: Screw Terminals—Screw and Solder Terminals—Screw Terminal above Panel with Solder Terminal below. Every type of connection.

Six series meet every requirement: No. 140, 5-40 screws; No. 141, 6-32 screws; No. 142, 8-32 screws; No. 150, 10-32 screws; No. 151, 12-32 screws; No. 152, ¼-28 screws.

Catalog No. 21 lists complete line of Barrier Strips, and other Jones Electrical Connecting Devices. Send for your copy.

Jones HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

▲ For more details circle NED-858 G7 on enclosed inquiry slip ▲

For Fuse Economy—
Use Economy Fuses!

ECON Dual-Element CARTRIDGE FUSES

Eliminate Needless Blows that "stall" Production

Economy DELAY Renewable Fuses and Renewal Links

Only Econ Fuses have the Econ-Alloy thermo element which has the property of changing from a solid to a liquid, without going through a plastic state. This makes possible Econ's faster and more accurate protection against overloads and shorts.

SEE YOUR ELECTRICAL WHOLESALER

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ECONOMY fuses for every purpose

ECONOMY FUSE & MANUFACTURING CO.
2717 GREENVIEW AVE. • CHICAGO 14, ILLINOIS

▲ For more details circle NED-859 G7 on enclosed inquiry slip ▲

HIGH-SPEED SAW WITH CLAMP TABLE MAKES IRREGULAR SHAPE CUTS

WRITE FOR FREE CATALOG

LOW INVESTMENT SAW CUTS METAL FAST & CLEAN

Whether you're making straight cuts, odd angle cuts or irregular shapes such as turbine impeller blades, you'll find the Ty-Sa-Man 144 BD combination of speed and amazing accuracy will save you money. Table has positive air-driven clamps to hold material in any position. Other Ty-Sa-Man cut-off models from 10" to 58" cuts . . . long-cut saws for 4' to 60' cuts, with or without cross movement, for friction or abrasive sawing.

Ty-Sa-Man MACHINE COMPANY
550 WHITE AVE., KNOXVILLE, TENNESSEE

▲ For more details circle NED-860 G7 on enclosed inquiry slip ▲

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Circle the Numbers Below corresponding to items on which you want additional information. Your request will be sent promptly to the manufacturer. Please fill in the coupon completely. We'll pay the postage.

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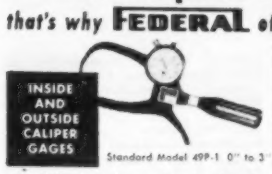

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The Yarway Type W Gun-Pakt Expansion Joint has an improved one-piece design of body and gland and improved method of packing that provide new maintenance economies and greater operating efficiency.

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New Processes & Materials

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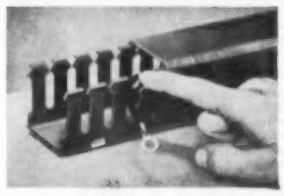
used without threading wire



Wire is inserted in this improved plastic wiring duct by pulling out the plastic finger separating the slots, laying the wire in the duct, and releasing the finger. The snap-in open slot design allows wires to be installed with lugs attached and eliminates all threading through holes. Cover snaps in place on duct after wires are placed. An overlapping closed slot design which allows wire insertion over full duct length with no dead spots is also available. Duct and cover are nonflammable vinyl plastic and meet JIC specifications. Cutting is with snips or wood cutting tools. Made by **Panduit Co.**, Dept. NDC, 10132 S. Washtenaw Ave., Chicago 43, Ill.

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PHOSPHOR BRONZE STRIP
silver clad to facilitate joining

Overlay of silver clad to phosphor bronze strip eliminates the need for brazing alloys containing zinc, cadmium or other low vapor pressure metals. Developed for electronic and electrical applications, the strip can be used where such vapors are not desired, as in electronic tubes. Material is available in tolerances of ±0.0001-in. to mill limits as low as 0.0005-in. thick. Ratio of silver to bronze is variable. Made by **American Silver Co.**, Dept. NED, 36-07 Prince St., Flushing 54, N. Y.

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TEFLON-LINED STEEL PIPE
can withstand 400° F and 300 psi

Teflon lining of this steel pipe is impervious to attack of nearly all acids, chemicals, solvents and caustics. It will withstand temperatures up to 400° F and pressures of 300 psi, has no toxic effects and has property of nonadhesion. Working pressures of the lined pipe are limited by flange strength. Expected applications are in food processing, pharmaceutical, chemical, metal finishing, bottling, petroleum and mining fields. Sizes offered are 1, 1½, 2 and 4-in. diameters in 2, 5 and 10-ft lengths. Made by **Haveg Industries, Inc.**, Halocarbon Div., 934 Greenbank Rd., Wilmington 8, Del.

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LABEL ADHESIVE
fastens labels to any surface

Labels can be fastened to any surface, including such plastics as polyethylene, vinyl, styrene and rubber, with Labelgrip label adhesive. It will also adhere to tin, glass, steel, cork, fabric and many other materials. Adhesive is waterproof, clean-working and fast-drying, and can be applied by brush or labeling machine. It is offered in 1, 5 and 55-gallon containers. Developed by **Adhesive Products Corp.**, 1662 Boone Ave., Bronx, N. Y.

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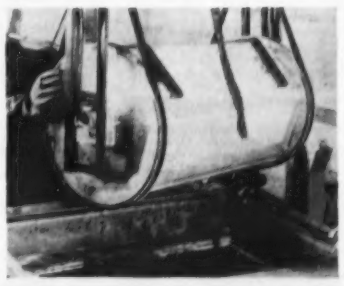
ZINC BRIGHTENER
is added to parts plating bath



When added to the barrel plating bath for small parts, Zinc - Kote zinc brightener produces brilliant zinc deposits on entire surface of all parts. Need for subsequent bright dipping is eliminated. Zinc deposit formed is thick and close-grained, assuring excellent underseal for finishes and protection from rust and corrosion. Foundation is good for chromate finishing and Bonderizing. Plating current ranges from 60 to 90 amp per sq ft depending upon type of work being processed. Brightener is compatible and effective in all zinc barrel solutions. Developed by **Smoothex, Inc.**, 10703 Briggs Rd., Cleveland 11, O.

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Here's everything you need for a low-cost, trouble-free microfilming operation . . . one that will meet *your* individual requirements.

- **Kodagraph Micro-File Machines**—three separate models designed to meet a variety of conditions. *Each* a high-precision unit which can be operated by anyone.
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Graphic Reproduction Sales Div.
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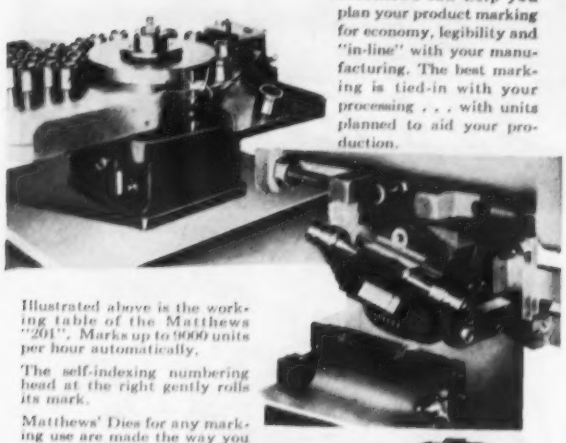
for Planned Production



Matthews can help you plan your product marking for economy, legibility and "in-line" with your manufacturing. The best marking is tied-in with your processing . . . with units planned to aid your production.

Illustrated above is the working table of the Matthews "201". Marks up to 9000 units per hour automatically.

The self-indexing numbering head at the right gently rolls its mark.

Matthews' Dies for any marking use are made the way you want them!

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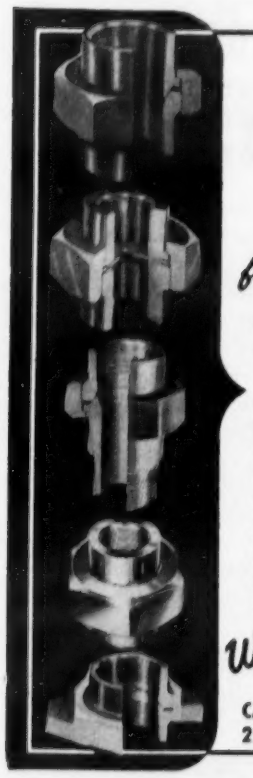

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(Actual Size)

After consultation with our engineering staff and with the use of dies from our tremendous library maintained specifically to save our customers time and money, this part illustrated actually saved one manufacturer 94% of usual production costs!

Price breakdown was as follows:

Tools	$41.00
Labor	.059
Material	.0021

SAVED— $681.00 or 94%

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Use WLS for production quantities up to 100,000 when low cost, fast delivery, possible design changes for virtually nothing, are important factors!

LOW die cost
FAST delivery
- Blanking
- Forming
- Piercing
- Drawing
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- Stenciling
- Tapping
- Countersinking
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- Machining
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FREE
1. Write now for a free sample part with a cost summary.
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3. Send in your blueprints to our engineering department for a prompt quotation.

WLS STAMPING COMPANY
3287 E. 80th Street • Cleveland 4, Ohio

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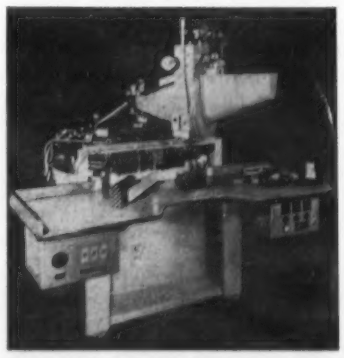

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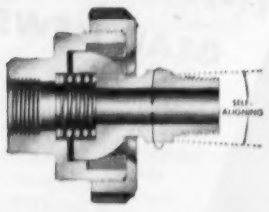
BARCO Self Aligning SWIVEL JOINTS

—when you need swivel joints in piping handling



STEAM

NEW 11CTS CHEMICALLY INERT SEAL—Pressure sealing and automatically self-adjusting for wear. No lubrication needed; no ball bearings. Ideal for steam service. Uniform performance over temperature range from −50° to 450°F. Outlasts previous seals 4 to 6 times.

DESIGNED SPECIFICALLY FOR STEAM—Self-aligning. Provides a wide tolerance for pipe fitting and machine alignment on molding, platen, and board presses. Better heat control, maximum safety, permanent installation. Three to four times more service life than other methods of providing flexibility.

Send for Engineering Catalog 265B

Send for Catalog 265B, "Barco Self-Aligning Swivel Joints." Ratings as high as 750 psi steam or 3000 psi hydraulic. Sizes ¼" to 2"; 90°, 180°, or straight styles. *Ask for recommendations.* BARCO MFG. CO., 530H Hough St., Barrington, Illinois.

For more details circle NED-878 G7 on enclosed inquiry slip

SPRAY CENTRIFUGALLY with this NEW self-contained portable electric spray gun

SAVES PAINT—SAVES LABOR

★

Handles any fluid—paint lubricant, protective coating, etc.

Weighs only 3 pounds.

3-speed Westinghouse motor spins rotor at 7000, 10,000 or 15,000 rpm—fingertip control.

Spray pattern adjustable in width from ¼ to 15 in.

Easily cleaned; no nozzles to plug up.

Minimum of overspray, fogging and splatter.

Plugs into any 110-v 60 cycle AC outlet.

Price: $44.95

Exclusive Territories Available to Established Industrial Representatives.

WRITE TODAY!

A. A. SMITH CO.
3473 Fairmount Blvd.
Cleveland Heights 18, Ohio

For more details circle NED-879 G7 on enclosed inquiry slip

New Literature & Catalogs

Hose Clamps

Wittek Mfg. Co.—Series of hose clamps for automotive, industrial and other applications is subject of 4-page illustrated catalog A-457. Among types covered are Sure-Tite, Strap-Tite, Auto-Clamp, Noc-Out, type G, type HP and tubing clamps. Available sizes are listed.

For more details circle NED-880 G7 on enclosed inquiry slip

Tracing Filing System

Dancer Stikfile Co.—Economical method of filing blueprints, maps, tracings, drawings, plans and offset plates is available in the Stikfile system, described in illustrated file AIA 35-H-32. Large loose sheets are bound and filed vertically in sets without punching holes. Center hook on binding channel facilitates hanging it from a rack or in a cabinet.

For more details circle NED-881 G7 on enclosed inquiry slip

Oil Seals

Chicago Rawhide Mfg. Co.—Sirvis leather, Sirvis-Conpor elastomer impregnated, and Sirvene synthetic rubber materials are available as sealing members in oil seals. Entire stocked line is covered in illustrated and condensed 68-page catalog. Chart indicates compatibility of each material with wide range of media to be sealed.

For more details circle NED-882 G7 on enclosed inquiry slip

Industrial Filter Paper

Eaton-Dikeman Co.—Clear, concise review of filtration practices, how paper serves as a filtering media, and aid in selecting one of several grades of filter paper are detailed in 24-page illustrated catalog 357. Photos, charts and diagrams are included. Papers are offered for many applications.

For more details circle NED-883 G7 on enclosed inquiry slip

Gas Regulators

Air Reduction Sales Co.—Various types of cylinder, manifold and pipeline pressure regulators for industrial compressed gases, both single and two-stage, are covered in 40-page illustrated catalog 806. Also described are laboratory and metering regulators and gas proportioners. Flow and pressure charts are included, along with related equipment data.

For more details circle NED-884 G7 on enclosed inquiry slip

Custom Metal Fabrication

Tornqvist Co.—Among the many custom fabricated products described and illustrated in 12-page brochure "Let Tornqvist Do It" are hoppers, hopper scales, cabinets, dump cars, chemical tanks, conveyor brackets and agitators. Production facilities are outlined and specialties are listed.

For more details circle NED-885 G7 on enclosed inquiry slip

Process Increases Wear Parts Life

Electrolizing Corp.—Electrolizing process which deposits a hard, dense, nonmagnetic alloy on the surface of metal being treated is subject of 24-page booklet. It has a high surface hardness, low coefficient of friction and good antiseizure characteristics. Test comparisons, service reports and much other technical data are included.

For more details circle NED-886 G7 on enclosed inquiry slip

Pumps

M. T. Davidson Co.—Series of single stage, double suction pumps with capacities from 50 to 200 gpm is subject of 4-page illustrated bulletin 115. Speeds range from 1150 to 3500 rpm and heads from 25 to 300 ft. Specifications are given. Horizontal, double-acting, single cylinder steam pumps are detailed in another 4-page bulletin. Application data and specifications are given.

For more details circle NED-887 G7 on enclosed inquiry slip

Striking Tools

Damascus Steel Products Corp.—Targethead tools which feature safe, long life striking heads are subject of comprehensive 28-page catalog 57. Data are given on such forged end tools as chisels, punches, star drills, hammers, calking irons and rivet sets. Also described are screwdrivers, nippers and pincers.

For more details circle NED-888 G7 on enclosed inquiry slip

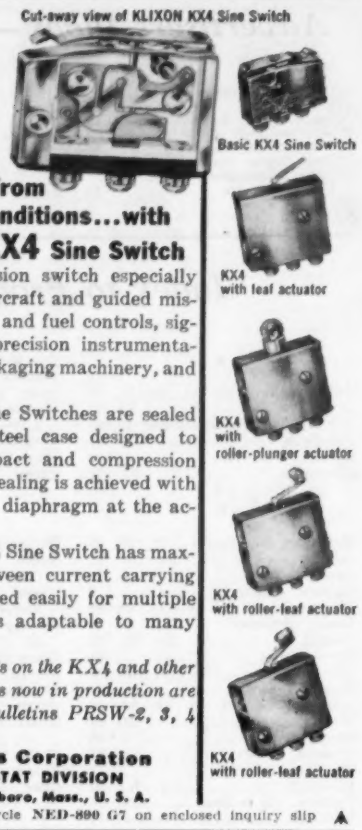
Tungsten Carbide Tools

Adamas Carbide Corp.—Described and illustrated in 32-page catalog 357 are tungsten carbide tools, tool tips, dies, wear parts, Dex-A-Tool mechanical tool holder and Ceralox sintered aluminum oxide. Throw-away inserts described are available in variety of grades, sizes and types.

For more details circle NED-889 G7 on enclosed inquiry slip

NOW!

Cut-away view of KLIXON KX4 Sine Switch



Get precision switching completely free from environmental conditions...with the KLIXON KX4 Sine Switch

Here's a small precision switch especially designed for use in aircraft and guided missiles, jet engine speed and fuel controls, signalling devices and precision instrumentation, chemical and packaging machinery, and industrial equipment.

KLIXON KX4 Sine Switches are sealed in an extra strong steel case designed to withstand heavy impact and compression loads. True hermetic sealing is achieved with a metal "wave type" diaphragm at the actuating lever.

The KLIXON KX4 Sine Switch has maximum clearances between current carrying parts. It can be ganged easily for multiple pole operation and is adaptable to many types of actuation.

Technical Data Sheets on the KX4 and other KLIXON Sine Switches now in production are available. Write for Bulletins PRSW-2, 3, 4 and 5.

Metals & Controls Corporation
SPENCER THERMOSTAT DIVISION
3307 Forest Street, Attleboro, Mass., U. S. A.

For more details circle NED-890 G7 on enclosed inquiry slip

THE BIG "YANKEE" DOES A BIG JOB

"YANKEE" No. 130A
Spiral Ratchet Screw Driver

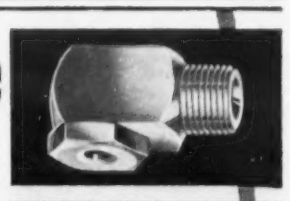
...2 extra bits with every driver

Wherever screws are driven and drawn with any degree of frequency, this big "Yankee" does a big job. It's a rugged tool with automatic quick-return action and it's made to stand long, hard usage. Insist on "Yankee," American made tools from the Tool Box of the World. Your industrial supply distributor has them in stock. Stanley-Yankee Tools, Inc., subsidiary of The Stanley Works, Dept. 5807, Philadelphia 33, Pa.

STANLEY

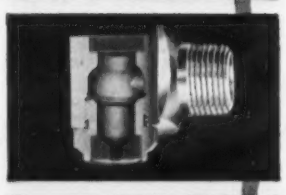
For more details circle NED-891 G7 on enclosed inquiry slip

Spray Nozzle types choice of over 12,000 basic designs



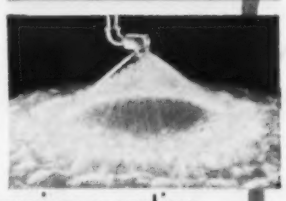
materials

brass, stainless steel, lead, hard rubber, hardened steel, tungsten carbide and many others.



performance

uniform distribution with spray angle, capacity, impact and atomization to your specifications.



to improve every spraying operation

Improve performance, lower spraying costs with Spraying Systems spray nozzles. Prompt delivery. For complete information write for Catalog 24.

SPRAYING SYSTEMS CO.
3211 RANDOLPH ST. • BELLWOOD, ILL.

ADVANCED SPRAY NOZZLE DESIGN FOR NEW DIMENSIONS IN CONTROL AND PERFORMANCE

For more details circle NED-892 G7 on enclosed inquiry slip

with a Metallic Finish that Brightens with Age

Brush or spray SUPERCOTE ALUMINUM No. 127 on your roof and get a waterproof surface and a heat-reflecting finish in one roof coating application. Made with tough, elastic, water-resistant vegetable pitch combined with finely ground flakes of aluminum. Reduces under-roof temperatures up to 20°.

SUPERCOTE ALUMINUM's pitch-base vehicle locks in the vital roofing oils—keeps them from rising to the surface to oxidize or dull the aluminum. A SUPERCOTE ALUMINUM roof actually gets brighter with age.

FREE Aluminum Roofing Booklet Shows How

Write Dept. D-7

THE GARLAND COMPANY
CLEVELAND 5, OHIO

▲ For more details circle NED-893 G7 on enclosed inquiry slip ▲

NEW OHIO RN ReSistWeld Nuts

reduce costs · speed assembly · simplify design

Here is a new *primary fastener* that helps stop rising production costs . . . introduces new efficiency to production. Attached by resistance welding, the RN weld nut becomes an integral part of the parent component. It can't be shaken or jarred loose. It simplifies product design and speeds final assembly.

RN's are Fused to Stay

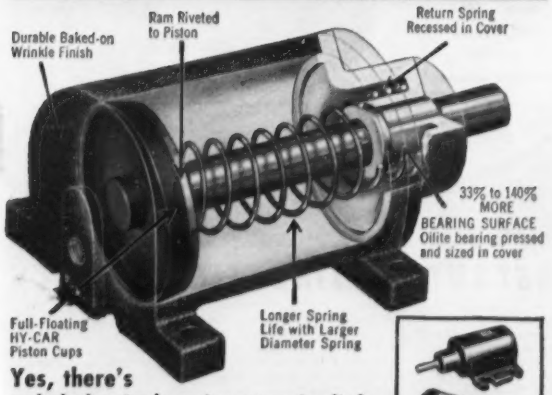
WITHOUT METAL FILLERS OR FLUXES

The RN nut's dualine projections coalesce . . . actually merge . . . with the metal of the part to which they're welded. The nut is as securely fixed as if it were formed in the part. The RN's low, narrow shape gives it a broad range of possible application and it welds just as firmly to thin sheets as to larger thickness 1/8" or more.

THE OHIO NUT & BOLT CO.
14 First Avenue • Berea, Ohio

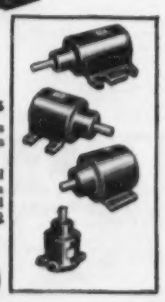
▲ For more details circle NED-894 G7 on enclosed inquiry slip ▲

A $32.90 Air Cylinder Can Save You thousands of dollars!



Yes, there's no doubt that simple, spring-return air cylinders are cheaper to start with, and use only half as much air as double-acting cylinders. The valves and hookups are simpler and cheaper, too.

What's more, MEAD distributors carry local stocks for *immediate* delivery in six bores from 1" to 6", six stroke lengths from ½" to 3", and three mountings. Write now for single-acting cylinder catalog NA-77.



MEAD

SPECIALTIES CO., 4114 N. Knox, Dept. NA-77, Chicago 41, Ill.

▲ For more details circle NED-895 G7 on enclosed inquiry slip ▲

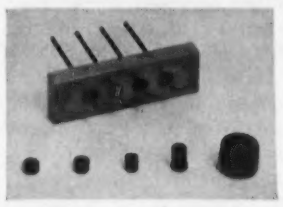
New Processes & Materials

GALVANIZED SURFACE COATING eliminates paint peeling problem

Applied right over brand new, unpainted galvanized, aluminum or terne plate surfaces, Galvinoleum coating eliminates paint peeling problems. Coating is formulated for gutters, downspouts, siding, roofing, ventilating ducts and similar surfaces. Etching of the galvanized surface, as well as weathering, are unnecessary. Rust - Oleum 575 outside white or any good oil base house paint can be used over Galvinoleum. Red, gray, green and metallic colors are offered. Formulated by **Rust-Oleum Corp.**, 2799 Oakton St., Evanston, Ill.

▲ For more details circle NED-896 G7 on enclosed inquiry slip ▲

HIGH TEMPERATURE CERAMIC seal bonds to most stainless steels



Ability to withstand severe physical and thermal shocks without leaks or cracking is feature of Ceramicite, a ceramic material for hermetic seal applications at high temperatures. Compound bonds physically to most stainless steels and has a similar thermal expansion. Leak-tight seals with good electrical characteristics in continuous operation at 700° F are obtained. Ceramicite is available as preformed pieces (shown in foreground), ready for firing in fabrication of seal components, and as complete seal components, such as single and multiple pin terminals and headers. Made by **Consolidated Electrodynamics Corp.**, Sierra Madre Villa & La Tierra St., Pasadena 8, Calif.

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RIGID PLASTIC COMPOUNDS furnished as one-package liquids

Upon heating to 350-400° F, Rigidsol one-package, low viscosity, free-flowing rigid plastisol liquid compounds are converted to tough, rigid, nonbrittle elastomers. Series of low plasticized vinyl dispersions produces hardnesses as high as 60 on the Shore Durometer D-scale. Compounds maintain good viscosity stability upon aging and can be used in rotational molding, slush molding, spread coating and casting applications. Typical end products produced are anatomical models, boat bumpers, life rings, battery water jugs and toys. Made by **Watson-Standard Co.**, 219 Galveston Ave., Pittsburgh 30, Pa.

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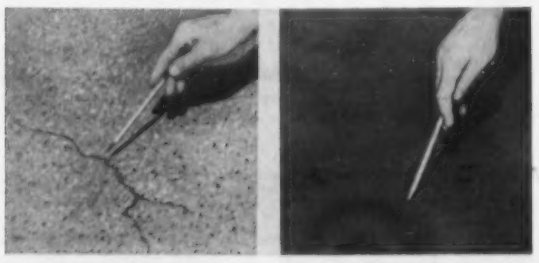
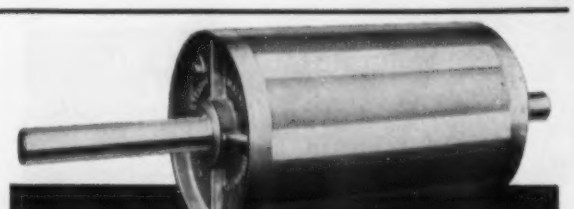
ASPHALT COATING has improved weather resistance

Increased service life of asphalt surfaces results from use of Black Top Seal, a liquid coating utilizing a coal tar pitch base. Improved product offers



increased resistance to weathering and abrasion when applied over new or old asphalt. Tough, weatherproof surface seal formed is impervious to drying effects of the sun and temperature variations, and is unaffected by solvent action of gasoline and oils. Application is by brush, squeegee or distributor truck. Photo at left shows untreated 3-year old pavement. Picture at right shows 26-year old driveway that has been treated with Black Top Seal. Made by **Monroe Co.**, Dept. M-1, 10703 Quebec Ave., Cleveland 6, O.

▲ For more details circle NED-899 G7 on enclosed inquiry slip ▲



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Protect...

- Protect your reputation for product purity by removing contaminating tramp iron.
- Protect expensive crushers, grinders, choppers, etc. by removing spikes, cans, bolts, etc. before this iron junk can damage equipment.
- Protect your plant from spark-induced explosions caused by tramp iron striking metal surfaces.

Many standard models or custom-built units built to your requirements. Write today for Bulletin 350CL.

40

STEARNS MAGNETIC PRODUCTS
635 South 28th Street • Milwaukee 46, Wisconsin

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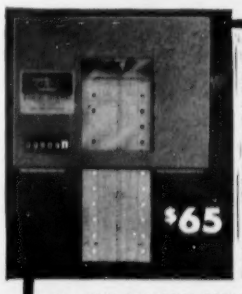
TIME RECORDER + TOTALIZER

automatic, continuous, operating data can be the difference between Profit and Loss!



Modern plant operation demands the most efficient and accurate means of evaluating both machine and man-power production . . . that's why leading companies everywhere are equipping their production lines, processes, systems and office machines with Time Recorder-Totalizers.

The Time Recorder-Totalizer monitors the operation of any machine, process or system by chronologically recording the time and duration of every "on" and "off" period during each day.

The Time Recorder-Totalizer makes it possible to analyze the efficiency and performance of any type of equipment plus simplifying cost accounting.

The TIME RECORDER-TOTALIZER incorporates the following features:

SPROCKET DRIVEN CHART . . . accurately timed . . . chronologically printed . . . available in speeds from one inch per hour to ten inches per minute . . . 250 linear feet per roll . . . each $1.25.

ELAPSED TIME METER . . . (Time Totalizer) registers accumulated "on" or production time.

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Order Stock No. 85,039-AE . . . . . full price . . . $99.50 f.o.b.
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EDMUND SCIENTIFIC CO., BARRINGTON, N. J.

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(the choice of leading motor manufacturers)

Only 5 basic parts, which can be completely disassembled and reassembled in minutes with only a screw driver as your complete tool kit.

LONGEST, TROUBLE-FREE OPERATION. Only 5 basic parts with an absolute minimum of wearing parts.

SIMPLEST TO ADJUST AND MAINTAIN—the *only* brake with external, visual wear indicators. A screw driver is your complete tool kit.

FAST STOP—QUICK RELEASE. Brake is spring-set, solenoid-released without delay or drag.

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Stearns ELECTRIC CORPORATION — formerly Stearns Magnetic Inc.

Call your local Stearns representative for complete magnetic brake data, or write Stearns direct for free Brake Portfolio D.

120 NORTH BROADWAY • MILWAUKEE 2, WISCONSIN

For more details circle NED-903 G7 on enclosed inquiry slip

TINS ALL METALS

Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale, dirt, and tin rusty surfaces thoroughly, it is completely stable and will not liquefy in can. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packed in 1½ lb. cans, price $3.00 f.o.b. *Advt.*

FARRELLOY CO.

1246 North 26th St. Phila. 21, Pa.

For more details circle NED-904 G7 on enclosed inquiry slip

NEW! DISCOVERY! SAVES PLUMBING BILLS

AMAZINGLY EFFECTIVE

Hose attachment feeds water thru gun while air is released causing chain reaction in pipe cleaning the most stubborn stoppage.

***CLEANS INSTANTLY**

Chicago — July 1st — Factories, Machine Shops, Offices including Home Owners are constantly having trouble with clogged-up pipes which proves expensive in Costly Plumbing Bills—

But now—using Water Impact and Air Pressure, here is a new unit called the **Plumber's Flushing Gun**, which cleans all lines up to 100 ft. It will open any number of bends in pipe. Yet anyone can operate this new gun, which triggers easily.

TOILETS, URINALS, SINKS, and FLOOR DRAINS clogged with paper, grease, rags, sand, and other debris can be cleared with one or more shots from the gun, **saving the owner, the Gun's price the first time it is used.** This new Flushing Gun may be used on any ⅛ to 6 inch waste pipe including Sink Drains, Floor Drains, Hot Water Pipes, Drinking Fountains, Septic Tanks, and Urinals. Obstructions melt away INSTANTLY when struck by the hammer like blow of this new unit.

This new Plumber's Flushing Gun is offered on a 30 Day Free Trial to prove its value. **BUT MOST IMPORTANT IS THIS**—What is this Tool worth to your Factory, Building, Machine Shop or in your own Home in **Costly Plumbing Bills Saved.** For your own good—Fill coupon right now—No agent will call—Obey that urge, mail now or write postcard. (Chicago Phone Kildare 5-1702)

MILLER SEWER EQUIPMENT, INC. 4638 N. Central Ave., Chicago 30, Ill.

Please send FREE BOOKLET on Flushing Gun, I am not obligated.

NAME _____

FIRM _____

STREET _____ CITY _____ STATE _____

For more details circle NED-905 G7 on enclosed inquiry slip

New Processes & Materials

HIGH STRENGTH CERAMICS have exceptional thermal, electrical and strength-to-weight properties

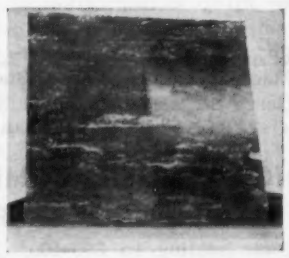
Readily formed by blowing, pressing and drawing, Pyroceram is a new family of crystalline glass materials that are harder than high carbon steel, lighter than aluminum and up to nine times stronger than plate glass. Over 400 compositions have been developed, each with special properties that adapt it for specific applications.

It can be tailor-made with thermal expansion ranging from slightly negative to high enough to match that of heavy metal. It can have electrical insulating properties superior to commercial dielectric ceramics, according to reports. It can be opaque or transparent. Flexural strengths range to 60,000 psi. Strength-to-weight ratio of one composition is equal to that of aluminum, and greater than that of titanium and stainless steel. Certain types retain their strength at temperatures to 1300° F. Thermal shock resistance of some materials is greater than that of dense alumina and equal to that of fused silica. Resistance to acid and alkali attack of one grade is almost equal to that of Pyrex borosilicate glass.

Materials are melted and formed like glass. Heat treatment converts the noncrystalline material to a hard, nonporous crystalline material. Illustration shows missile radomes before and after heat treatment that turns material from transparent noncrystalline to opaque crystalline. Developed by **Corning Glass Works,** Dept. 21, Box 544, Corning, N. Y.

For more details circle NED-906 G7 on enclosed inquiry slip

VINYL TILE SEALER gives excellent base for wax



Used on terrazzo and linoleum as well as vinyl and vinyl-asbestos tile, Flor - Life nonyellowing sealer assures added brilliance and luster to subsequent wax coats. The colorless, heavy-bodied sealer provides an excellent base for wax, has no objectionable odor and dries to tack-free, buffable finish in 15 to 20 minutes. One gallon will seal about 1250 sq ft of floor surface. It will not darken the lightest of floors. Developed by **Multi-Clean Products, Inc.,** Dept. NE, 2277 Ford Pkwy., St. Paul 1, Minn.

For more details circle NED-907 G7 on enclosed inquiry slip

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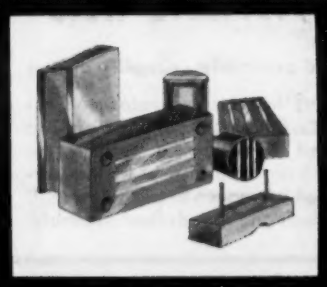

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